GROWTH AND DEVELOPMENT OF ASSET MANAGEMENT COMPANIES (AMC) IN INDIAN CAPITAL MARKET SINCE 2000

ABSTRACT

SUBMITTED FOR THE AWARD OF THE DEGREE OF

Doctor of Philosophy

In

Commerce

BY

DHANRAJ SHARMA

UNDER THE SUPERVISION OF

PROF. SYED HUSAIN ASHRAF

DEPARTMENT OF COMMERCE
ALIGARH MUSLIM UNIVERSITY
ALIGARH, INDIA (202002)

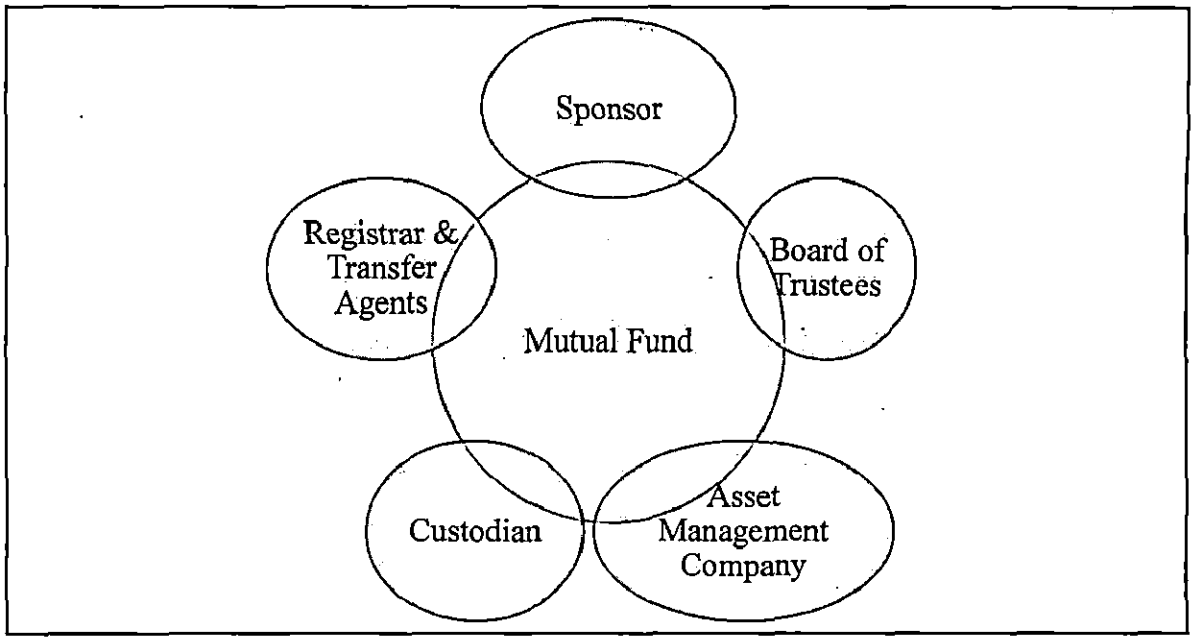
2015

ABSTRACT

Investment could be associated with the different activities, but the common target in these activities is to employ the money during the time period seeking to enhance the investor's wealth. Funds to be invested come from assets already owned, borrowed money and savings. By foregoing consumption today and investing their savings, investors expect to enhance their future consumption possibilities by increasing their wealth. But it is useful to make a distinction between real and financial investments. Real investments generally involve some kind of tangible asset, such as land, machinery, factories, etc. Financial investments involve contracts in papers or electronic form such as stock, bonds etc. Investors can use direct or indirect type of investing. Direct investing is realized using financial markets and indirect investing involves financial intermediaries. The primary difference between these two types of investing is that applying direct investing investors buy and sell financial assets and manage individual investment portfolio themselves. Consequently, investing directly through financial markets investors take all the risk and their successful investing depends on their understanding of financial markets, its fluctuations and on their abilities to analyze and to evaluate the investments and to manage their investment portfolio. Contrary, using indirect type of investing investors are buying or selling financial instruments of financial intermediaries (financial institutions) which invest large pools of funds in the financial markets and hold portfolios. Indirect investing relieves investors from making decisions about their portfolio. In general, indirect investing is more related with the financial institutions which are primarily in the business of investing in and managing a portfolio of securities (various types of investment funds or investment companies, private pension funds). By pooling the funds of thousands of investors, those companies can offer them a variety of services, in addition to diversification, including professional management of their financial assets and liquidity. In India there are three distinct categories of collective investment vehicles in operations namely, Mutual Funds (MFs), Collective Investment Schemes (CIS) and Venture Capital Funds (VCFs) which mobilize resources from the market for investment purposes. A mutual fund is a financial intermediary which acts as an instrument of investment. It collects funds from different investors to a common pool of investible funds and then invests these funds in a wide variety of investment opportunities. Small investors who unable to

participate in capital market, can assess the stock market through the medium of mutual funds which can manage their funds for maximizing returns. Mutual fund mobilizes the savings of a large number of small investors and invest the amount in common investment. Investors get the benefit of diversifying their portfolio and experience the professional services of asset management companies to make the best investment opportunities.

Figure - 1 Structure of Mutual Funds



Source- Association of Mutual Funds in India

A mutual fund is set up as a trust which has an asset management company. An asset management company is a legal entity formed by the sponsor to run the mutual fund. The asset management company must be registered by SEBI. It manages the funds of the mutual fund schemes by making investment in various types of securities. An Asset Management Company (AMC) is an investment management firm that invests the funds of investors in securities in line with the stated investment objectives. The diversification of a portfolio is done by investing in such securities which are inversely correlated to each other. They collect money from investors by way of floating various mutual funds schemes and used in the investment sector. Asset management companies seek to optimize risk-adjusted performance in light of the investor's attitude to and ability to cope with risk. Asset management Companies have been among the largest financial intermediary in the international financial markets for the last 25 years. They held a large portion of pooled asset and invest these assets in financial securities like equities and debt instrument. Asset Management

Companies do business in a turbulent markets and complex regulatory reform. In this kind of environment, a trusted advisor with a balanced, comprehensive and international perspective can be an invaluable resource.

STATEMENT OF THE PROBLEM

India steadily emerged as a center of attractive investment opportunities, owing to high GDP growth rate and rising level of per capita income. The asset management industry is one of the fast growing sectors in India since economic reforms in 1991.The asset management industry has registered significant growth during the last decade and has emerged as an important financial intermediary. The growing importance of the industry may be observed in terms of increasing asset under management. The financial savings of the households in India and the savings of the private corporate sector form the main source of funds for the asset management industry. The asset under management (AUM) of Indian asset management companies increased from Rs. 90587 crores (3.85 per cent of the GDP) in 2000-01 to Rs. 905120 crores (15.74 per cent of the GDP) in 2013-14. The growth of the industry provide wide variety of investment option to the investors since there are 1638 mutual fund schemes at the end of March 2014. The penetration of the industry also shows the remarkable growth over the period of time. There is a need to conduct research to know the efficiency and true competency of the asset management companies, especially by evaluating the performance of these companies in terms of market timing abilities and comparing the performance of managed schemes with benchmark index by using different portfolio evaluation measures. There is a need of comprehensive research which provides an empirical analysis related to performance of asset management companies. It will help investors, regulators, fund managers and other participants in better decision making.

RESEARCH GAP

From the comprehensive literature review of earlier studies, it is found that a very few research has been conducted to find out the growth and development of asset management companies in India. The review of empirical literature provides us details about the performance evaluation measures to assess the growth and development of asset management companies in India. The present study differs from the earlier studies on the following aspects-

- This study fills the gap in the literature of the performance of asset management companies by conducting investment performance measure and market timing models which has been rarely examined in any developing country.
- The study covers a detailed theoretical and analytical research for the period of recent fourteen years ranging from 2000-01 to 2013-14 regarding growth and development of asset management industry in Indian context.
- In the previous studies, relatively small sample sizes have been taken to conduct the research. Such small samples may not provide meaningful inferences and the result cannot be generalized. To overcome this limitation, the present study is based on 62 sample mutual fund schemes operating during the entire study period. It used daily NAV data for measuring fund performance of sample mutual fund schemes rather than weekly and monthly NAV data taken in earlier research.
- This study differs from earlier studies as it categorize the results on the basis of institution sponsorship (Bank Sponsored, Institution and Private asset management companies) and investment objective (Growth, Hybrid and Income schemes).
- Earlier studies did not assess the impact of important determinants on the growth of asset management companies and do not provide the comparative study between public and private asset management companies.
- The study also evaluates the performance of asset management companies during the pre and post financial crisis period which was uncovered area. The market competitiveness of the asset management companies is not taken into consideration in previous research.

SCOPE OF THE STUDY

The present study would cover period from 2000-01 to 2013-14, a period of 14 years to assess the growth and development of the asset management companies in general and the investment performance of sample mutual fund schemes managed by asset management companies in particular. The study relates to 62 mutual fund schemes affiliated to 19 asset management companies. All the schemes in the sample have been in operation during the study period. The various benchmark indexes have been used by the researcher to compare the performance of sample mutual fund schemes. The study has used the daily yield of 91- day Treasury bills (T-Bills) as a proxy of risk free rate of return. The results are classified on the basis of sponsorship

institutions (Bank Sponsored, Institutions and Private Asset Management Companies) and investment objective (Growth, Hybrid and Income schemes).

OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

- To evaluate the investment performance of sample schemes managed by asset management companies along with benchmark index by using different portfolio measurement techniques.
- To examine the stock selection and market timing abilities of asset management companies in India.
- To analyze the impact of specific determinants on the growth of asset management companies in India.
- To compare the performance of public sector asset management companies with private sector in India.
- To trace out the performance of asset management companies during the pre and post financial crisis period.
- To assess the market competitiveness of the asset management companies in India during study period.

TESTABLE HYPOTHESES

The study attempts to test following hypotheses to evaluate performance of asset management companies –

Null Hypothesis-1:

The investment performance of mutual fund schemes managed by asset management companies is not providing consistent risk adjusted return to unit holders in Indian capital market.

Alternate Hypothesis-1:

The investment performance of mutual fund schemes managed by asset management companies is providing consistent risk adjusted return to unit holders in Indian capital market.

Null Hypothesis-2:

The asset management companies in India are not having any specific investment strategy to time the market.

Alternate Hypothesis-2:

The asset management companies in India are having specific investment strategy to time the market.

Null Hypothesis-3:

There is no significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of asset management companies in India.

Alternate Hypothesis-3

There is a significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of asset management companies in India.

Null Hypothesis-4:

There is no significant difference in the AUM of public sector and private sector asset management companies in India.

Alternate Hypothesis-4:

The AUM of Private sector Asset Management Companies is significantly improved as compare to public sector in India.

Null Hypothesis-5:

There is no significant difference in the size of corpus of asset management companies in Pre and Post Financial Crisis period.

Alternate Hypothesis-5:

There is a significant difference in the size of corpus of asset management companies in Pre and Post Financial Crisis period.

Null Hypothesis-6:

The market competitiveness is lacking among the asset management companies in India.

Alternate Hypothesis-6:

There is market competitiveness among the asset management companies in India.

RESEARCH METHODOLOGY

Research Methodology is an important part of the research. Research methodology includes the criteria of sample selection, sources of data collection and various tools applied in the study for analysis. .

Sample Schemes

The samples of mutual fund schemes are selected on the basis of schemes operating in the entire study period. First the asset management companies are selected which are in operation from 2000-01 to 2013-14. Than schemes are identified which are

operating during the whole study period for selected companies. The study used a sample of 62 mutual fund schemes which belong to 19 Asset Management Companies, related to Bank sponsored, Institution and Private asset management companies. While 7 schemes from three Bank Sponsored companies, 4 schemes from one Institution companies and 51 schemes have taken from fifteen private asset management companies. Investment objective wise classification of the 62 schemes involves 36 growth schemes, 14 hybrid schemes and 12 income schemes.

Sources of Data

The study employed the secondary sources of data. For evaluating the performance of sample mutual fund schemes the historical Net Asset Value (NAV) is taken into consideration. Therefore, in the study daily NAV have been used for all the schemes for the period from April 1, 2000 to March 31, 2014. The data have been collected from the various websites such as SEBI, AMFI, Value Research India, R.R. Finance and respective websites of mutual funds. In order to have a meaningful evaluation, the schemes are comparing with their respected benchmark portfolios. The closing value of respected benchmark indexes is also used to calculate the daily market return in the above mention period. The data has been collected from the respective websites of benchmark index. The daily change is observed for the sample mutual fund schemes, market index and 91 days T- bills for the above mention period. There were missing observations for some of the sample mutual fund schemes, resulting different number of observations for different schemes. The data of asset under management is taken from the various reports of AMFI.

Techniques applied in Research

The various tools and techniques used in research are classified in investment performance measures and statistical techniques. The tools are -

Return

The average return on the sample mutual fund schemes has been worked out using the daily return series by the following.

$$Return = (NAV_t - NAV_{t-1}) / NAV_{t-1}$$

Similarly, the daily returns for the benchmark index have been computed. For the benchmark index, the return is calculated as:

$$Return = (Index_t - Index_{t-1}) / Index_{t-1}$$

The weekly yield on 91 days treasury bills are already in the return form.

Risk

The risk is calculated on the basis of daily-end NAV. The following measures of risks associated with mutual funds have been for the study:

Standard Deviation- The total risk is measured by the standard deviation of the daily returns which was calculated using the following formula:

$$\sigma = \sqrt{\frac{1}{n-1}\sum_{t=1}^{n}(R_t - \overline{R})^2}$$

The square of the standard deviation is called the variance. *Variance*$= (\sigma)^2$

Coefficient of Variation- expresses the total risk undertaken by the mutual funds schemes under consideration per unit of returned achieved. More specifically, the coefficient of variation was given by:

$$Coefficient\ of\ Variation = \frac{\sigma}{\overline{R}}$$

Beta(β)- Beta estimate the systematic risk, is the fund's volatility as regard market index measuring the extent of co movement of fund with that of the benchmark index.

$$\beta = \frac{Covariance\ between\ Mutual\ Fund\ Return\ and\ Market\ Return}{Variance\ of Market\ Return}$$

Higher the values of beta indicate a high sensitivity of fund returns against market return and the lower the value indicate lower sensitivity.

Treynor Measure

Treynor (1965) conceived an index of portfolio performance called as reward to volatility ratio based on systematic risk. It is denoted by T_P is the excess return over the risk free rate per unit of systematic risk, in other words it risk premium per unit of systematic risk.

$$T_P = \frac{Risk\ Premium}{Systematic\ Risk}$$

$$Fund's\ T_P = \frac{R_p - R_f}{\beta_p} \qquad Benchmark's\ T_P = \frac{R_m - R_f}{\beta_m}^1$$

Sharpe Measure

Sharpe (1966) devised an index of portfolio performance measure, referred to as reward to variability ratio. The Sharpe ratio provides the reward to volatility trade-off. It is the ratio of the fund portfolio's average excess return divided by the standard deviation of the return and is given by:

Market Beta (β) is always 1.

$$S_P = \frac{Risk\ Premium}{Total\ Risk}$$

$$Fund's\ S_P = \frac{R_p - R_f}{\sigma_p} \qquad Benchmark's\ S_P = \frac{R_m - R_f}{\sigma_m}$$

Jensen Measure

Jensen (1968) propound Jensen Alpha measures which is intercept from the Sharpe-Linter CAPM regression which measure impact of market portfolio excess returns on portfolio excess return. Jensen's alpha is the arithmetic difference of the portfolio's return from the return of a portfolio on the securities market line with the same beta. Jensen defines his measure of portfolio performance as the difference between the actual return on a portfolio in any particular holding period and the expected returns on that portfolio conditional on the risk free rate, its level of systematic risk and the actual return on the market portfolio. Jensen's alpha measures is given by the-

$$Differential\ Return = Portfolio\ Return - CAPM\ Return$$

$$Or$$

$$\alpha = R_p - \{R_f + \beta(R_m - R_f)\}$$

Fama Measures

Fama (1972) measures breaks down the observed return into four components:

Risk free return	R_f
Compensation for systematic risk	$\beta(R_m - R_f)$
Compensation for inadequate diversification	$(R_m - R_f)\{(\sigma_p/\sigma_m) - \beta)\}$
Net superior returns due to selectivity	$(R_p - R_f) - \{(\sigma_p/\sigma_m)(R_m - R_f)\}$

$$F_p = Portfolio\ Return - Risk\ free\ return - Returns\ due\ to\ all\ risks$$

$$= (R_p - R_f) - \{(\sigma_p/\sigma_m)(R_m - R_f)\}$$

A positive value for F_p indicates that the fund earned returns higher than expected returns and lies above CML and a negative value indicates that the fund earned return less than expected returns and lies below CML.

Treynor & Mazuy Market Timing Measure

The Treynor & Mazuy model introduced in 1966 by Jack Treynor and Kay Mazuy. It can be used to analyze both the selection and timing abilities of a mutual fund. The performance analysis is divided into two pieces, one analyzing the mutual funds ability to find undervalued stocks (selectivity) and the other analyzing the asset manager ability to predict the direction the market will be moving in timing. Treynor & Mazuy added a quadratic term to Jensen's single index model to test the market

timing skills of asset managers. Besides examining the validity of Jensen's measure, the model decomposes the source of performance implied by the index model. The model is based on the premises that portfolio returns are a non linear function of the market return. The specification of the model is given by

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,(R_m - R_f)^2 + \varepsilon_{pt}$$

Henriksson & Merton Market Timing Measure

Henriksson and Merton (1981) proposed a similar but simple model to test the market timing abilities of the fund manager. Treynor and Mazuy (1966) argued in the model that the fund manager who times the market, is continuously changing the beta of his portfolio depending on the magnitude of the (Rm – Rf) term. However, Heniksson and Merton in their model took a more qualitative approach to market timing. They assumed that the market timers are required to forecast whether Rm ≥Rf, (up markets) or Rm ≤ Rf (down markets) and select a fund beta accordingly (a large value if the market is expected to do well, i.e. Rm ≥ Rf and a small value otherwise, i.e. when Rm ≤ Rf.

They represented such a relationship mathematically by using a regression equation involving a dummy variable as follows:

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,[D(R_m - R_f)] + \varepsilon_{pt}$$

Multiple Regression

Regression analysis is a statistical tool which measures the impact of independent variables on dependent variable. Regression technique has been great importance to the field in research. Usually investigator seeks to ascertain the causal effect one variable upon another. To analyze such issues, the investigator assembles data on the underlying variables of interest and employs the regression technique to estimate the quantitative effect of the causal variables upon the variables that they influence. In multiple regression, a linear combination of two or more predictor variable is used to explain the variation in a response. The general multiple regression equation is

$$Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 \ldots\ldots\ldots\

regression equation. R-square is the ratio between the variation in the dependent variable explained by the regression equation and the total variation in the dependent variable. The measure falls between zero and one and is usually expressed in percentages. If r-Square equals to one the equation is explained 100 per cent variability in the dependent variable y.

Independent sample T-Test

This section discusses the most typical form of t-test that compares the means of two independent random samples. They are independent in the sense that they are drawn from different populations and each element of one sample is not paired (linked to) with its corresponding element of the other sample.

T-tests assume that samples are randomly drawn from normally distributed populations with unknown parameters. In addition to these random sampling and normality assumptions, it is necessary to check the equal variance assumption when examining the mean difference of two independent samples. The population variances of the two groups, σ21 and σ^2_2 need to be equal in order to use the pooled variance. Otherwise, the t-test is not reliable due to the incorrect variance and degrees of freedom used.

$$t = \frac{(\bar{x}_1 - \bar{x}_2)}{S}\sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$\text{Where} S = \sqrt{\frac{\sum(X_1 - \bar{X}_1)^2 + \sum(X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}}$$

Paired sample T-Test

T-tests compare the means of two samples. Two variables may or may not be independent. When each element of a sample is matched to its corresponding element of the other sample, two samples are paired. This paired t-test examines the mean of individual differences of paired measurements and thus is appropriate for pre-post situations. The paired t-test is based on the pair wise differences in values of matched observations of two samples. The difference of matched pairs is treated as a variable; the logic of the paired t-test and one sample t-test is identical.

$$t = \frac{\bar{d} - \mu_d}{\frac{s_d}{\sqrt{n}}}$$

Herfindahl-Hirschman Index

The Herfindahl-Hirschman index, better known as the Herfindahl index, is a statistical measure of concentration. It is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them. The index was developed independently by the economist Hirschman A.O. (1945) and Hefindahl O. C. (1950). Hirschman presented in the index in his book "National power and the Structure of the foreign trade" and Herfindahl's index was presented in his unpublished doctoral dissertation "Concentration in the U. S. steel industry." HHI is an economic concept widely applied in competition law, antitrust and also technology management. Increases in the Herfindahl Hirschman index generally indicate a decrease in competition and an increase of market power, whereas decreases indicate the opposite. The major benefit of the Herfindahl Hirschman index in relationship to such measures as the concentration ratio is that it gives more weight to larger firms. The HHI accounts for the number of firms in a market, as well as concentration, by incorporating the relative size (that is, market share) of all firms in a market. It is calculated by squaring the market shares of all firms in a market and then summing the squares, as follows:

$$HHI = \sum_{i=1}^{N} s_i^2$$

or

$$HHI = s_1^2 + s_2^2 + s_3^2 + \ldots + s_n^2$$

Concentration within an industry refers to the degree to which a small number of firms provide a major portion of the industry's total production. If concentration is low, then the industry is considered to be competitive. If the concentration is high, then the industry will be viewed as oligopolistic or monopolistic. The Herfindahl-Hirschman Index (HHI) calculates concentration ratios by squaring the market share of the fifty largest firms in an industry.

CHAPTER PLAN

The study is presented in six chapters. **Chapter I** introduces the concept of investment, collective investment vehicles and global asset management industry. This chapter also deals with research gap, objective, hypotheses, scope, research methodology significance, limitation and expected contribution of the research.

Chapter II presents an extensively review of the existing literature on the subject which provide an idea about the overall view of industry. This chapter includes all relevant previous studies based on benchmark studies, investment performance, market timing performance and other important literature related to asset management companies.

Chapter III deals with the overview of Indian capital market. Detailed background, regulatory framework, function, recent initiatives and various instruments of capital market are discussed in this chapter. A detailed discussion on growth and development of Indian capital market is a part of this chapter.

Chapter IV is devoted to theoretical framework of asset management companies in India. It deals with the function, legal aspects, duties and obligations of the asset management companies. A detailed background of mutual fund schemes manage by asset management companies and their current scenario is being discussed.

Chapter V concerns with analysis and interpretation. It evaluates the investment performance of sample mutual fund schemes by using different portfolio evaluation measures. It measures the capabilities of asset management companies to time the market by using the market timing models. It analyzes the impact of important determinants on the growth of asset management industry. This chapter also attempts to compare the performance of private and public asset management companies, evaluate the market competitiveness and effect of financial crisis on the industry.

Chapter VI presents a summary of conclusions of the study and the suggestions.

FINDINGS OF THE STUDY

The findings are based on in depth investigation of the research problem and the analysis of the data. The major findings of the research are:

Findings related with Investment Performance Measures

- The corpus size indicates strong position of Asset Management Companies in Indian capital market. Indian Asset Management Companies has grown at the CAGR of 17.86 per cent during the study period. Significant growth has been witnessed due to competency of Asset Management Companies and their ability to generate consistent risk adjusted return in long run.
- From the Relative risk adjusted return analysis, it is found that 46 sample mutual fund schemes were outperform the benchmark index in Treynor Ratio and 37 sample mutual fund schemes were outperform the benchmark index in Sharpe

ratio. Most of the outperforming schemes belong to growth and hybrid schemes. The focus on equity related instruments in the asset allocation strategy is one of the important factors that enable mutual fund schemes to outperform the market. Long run investment especially in Blue Chip stocks also helped the fund manager to generate the positive risk adjusted return during the study period.

- It is found that 7 schemes in Treynor measure and 27 schemes in Sharpe measure are found to be positive and significant. It shows that fund manager are dealing efficiently with controllable part of the risk with their specialize knowledge but systematic risk is still matter of concern to Asset Management Companies.
- The Absolute risk adjusted return also provide the same picture as 24 schemes found positive and significant in Jensen Measure in which 20 schemes from growth, 4 belong to hybrid schemes. These positive and significant schemes generates the differential return i.e. fund return is more than CAPM return indicates the superior performance of stock selection ability of fund managers.
- Fama Measure reveals that 25 schemes have shown negative net selectivity and the rest 37 scheme (59.68 per cent) have reported positive net selectivity. These positive schemes implie that fund manager have taken diversifiable risk that has been compensated by extra returns and schemes are able to get some additional compensation for their diversification activities.

Findings related with Market Timing Measures

- The result pertaining to market timing abilities of asset management companies in terms of both the two models- Treynor & Mazuy and Henriksson and Merton, do not support the hypothesis that Indian Asset management companies are able to time the market correctly. From the analysis we found that mutual fund schemes are able to time the market but in wrong direction and few schemes are able to time the market correctly.
- The analysis reveals that superior performance of sample mutual fund schemes during the study period have occurred due to stock selection ability of asset management companies rather than their market timing abilities.

Other Findings

- Multiple regression depict that Penetration is a major significant factor which positively influence the growth of Asset Management Companies. Any increase in the GDP directly or indirectly initiate the saving and investment pattern in the

economy and turnover is also found to be statistical significant with negative coefficient. The study reveals that there is a positive relationship between the fluctuations of the stock market and growth of Asset Management Companies. The direction of change in stock market is parallel to the growth of Asset Management Companies.

- The comparative study confirmed the increasing dominance of private sector Asset Management Companies during the study period. The share of Public Sector Asset Management Companies was 71.59 per cent in 2000-01 which declined to 19.43 per cent in 2013-14 while the share of Private sector Asset Management Companies was 28.40 per cent in 2000-01 which has risen to 80.57 per cent in 2013-14. Deregulation and Splitting of UTI had provided the platform to enhance the opportunities for Private sector companies. Apart from that the public sector Asset Management Companies have failed to come up to the common Investors expectations in terms of after sales service, timely delivery of unit certificates and dividend warrants, promptness in grievance redressed, investors right adherence, adequate and timely disclosure of information and under performance of most of the mutual funds schemes as against market performance. These draw backs provided an opportunity to private Asset management companies to grab the market. The CAGR of 28.40 per cent reflects the superior investment performance of private sector Asset Management companies during the study period.
- The Asset Management Industry was the least effected industry in India during the financial crisis period. The downtrend in the corpus of Asset Management Companies was not as severe as witnessed by capital market and financial institutions. The reason being that investment made in the mutual fund schemes is for long term perspective and the stock selection in portfolios was fundamentally strong. The principle of diversification helps in minimizing the risk level and reduces the chances of extreme loss of capital.
- It is clear from the concentration analysis that market competitiveness among the Asset Management Companies is unconcentrated. Due to regular entry of new companies in the industry, most of the large companies are unable to dominate the market. The asset of the industry is not concentrated however collectively top 10 companies have shown some abilities to influence the market structure as they hold more than 75 per cent of the assets during the study period.

Table 6.2 Summary of Hypotheses Testing

S. No.	Hypotheses	Research Technique	Inference
1	The investment performance of mutual fund schemes managed by Asset Management Companies is not providing consistent risk adjusted return to unit holders in Indian capital market.	Treynor Measure	7 Schemes are Positive and Significant out of 62 sample schemes.
		Sharpe Measure	27 Schemes are Positive and Significant out of 62 sample schemes.
		Jensen Measure	24 Schemes are Positive and Significant out of 62 sample schemes.
2	The Asset management Companies in India are not having any specific investment strategy to time the market.	Treynor & Mazuy Market Timing Model	2 Schemes are Positive and Significant out of 62 sample schemes.
		Henriksson & Merton Market Timing Model	3 Schemes are Positive and Significant out of 62 sample schemes.
3	There is no significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of Asset Management Companies in India.	Multiple Regression	Penetration- Significant p value (0.040) < 0.05
			Scheme Size-Insignificant p value (0.144) > 0.05
			Turnover- Significant p value (0.040) < 0.05
			NSE- Significant p value (0.000) < 0.05

4	There is no significant difference in the AUM of public sector and private sector Asset Management Companies in India.	Independent Sample t-test (one tail)	P value (0.0015) < 0.05 (Significant)
5	There is no significant difference in the size of corpus of Asset management Companies in Pre and Post Financial Crisis period.	Paired Sample t- test	P value (0.000) < 0.05 (Significant)
6	The market competitiveness is lacking among the Asset Management Companies in India.	HH Index	Index value 0.0753 (Unconcentrarted Market)

SUGGESTIONS

The Indian asset management companies have come a long way since entry of private and foreign companies have been allowed to participate. The industry has shown maturely by introducing best practices, increasing the transparency levels and raising the bar on investor friendliness. Following suggestions may be taken into considered to improve and strengthen the overall performance of the asset management industry-

Consolidation of funds

The Indian asset management companies deals with more than 1600 mutual fund schemes which have different options such as growth, dividend, re-investment with multiple frequencies - daily, monthly, quarterly, etc. In a country where financial literacy is low, choosing among the huge span of funds is a major challenge for investors. Investors have to choose from funds with similar or slight variation in investment objective and names of the funds do not indicate much about their characteristic. Therefore it is necessary for companies to consolidate funds with similar objectives and also provide funds name funds that are simple to understand and also give some indication of the risk return trade-off and investment horizon. SEBI's latest decision on product labeling which directs AMCs to color code all funds based on risk and return measures besides.

Transparency in product positioning for retail investors

The assets under management of the industry are so far been mainly dominated by institutional investors and HNIs. Retail investors have been largely conspicuous by their meager presence. The share of mutual funds in household savings continued to be less than 5 per cent. Only the 'knowledgeable' or 'educated' investors know better to avail the benefit of mutual funds. Mostly retail investors have invested in equity funds, but it is also not on a regular basis. The only category where retail investors has grown exponentially is in gold ETFs, mainly due to the long bull-run in gold prices and general awareness about gold as an asset class. Thus Asset Management Companies should focus their product positioning for retail investors with simple product. Products must be positioned on the basis of risk-reward potential. Investors should take the help of financial planning specialists or refer to independent rankings to select the right funds as well as periodically monitor their performance.

Role of Banking in distribution of Mutual Fund schemes

The first point of contact for the common man with the financial world is the local bank branch. With more than 80,000 bank branches spread across the country, mutual

fund penetration can significantly improve even if 50 per cent of these branches are trained to sell mutual funds. With majority of AUM concentrated in the metros, the banking network can help expand the reach of mutual funds across the length and breadth of the country. SEBI's recent regulation which allows AMCs to charge an additional 0.30 per cent on inflows coming from beyond the top 15 towns is a welcome step towards ensuring larger and diverse retail participation. It is encouraging to note that the data on commissions published by AMFI indicates that the banking sector is the largest distributor segment, accounting for more than 40 per cent of the total commissions paid in 2013-14. The ATM network can also be used in selling of mutual fund schemes.

Risk Management

Innovation in the financial market has lent depth and dynamism to the capital market, but at the same time, it has also increased the level of risk. This necessitates the development of risk management as a core function of mutual funds operations. The basis of risk management is risk measurement. An effective risk management consists of structured risk standard approach, including a clearly laid down investment philosophy, a clear definition of the fiduciary responsibility of asset management companies, a fund specific risk policy and specific internal guidelines on risk tolerance in relation to the portfolio strategy. The concept of risk standard is associated with risk budgeting. Since most of Indian asset management companies funds have an indifferent aptitude to risk management, it is necessary that AMFI and SEBI give serious thought to the matter and jointly devise a risk standard documenting approach to risk management for mutual fund schemes.

Improve the standard of investment research

The future return of any investment depends on the risks associated with it. Risks and return are not a matter of mere perception but an outcome of various heterogeneous interactions. Management decisions therefore need to be based on certain hard facts, obtained through scientific analysis and forecasting. For this reason, Investment research occupies an important position in investment management. In Indian context, investment research has become the victim of indifferent attitude of management. There is neither any serious research mind set nor many competent persons are involved in the area of research. The failure of the many funds and investment decisions of several asset management companies bear testimony to the poor state of

research. Therefore regulator should give direction to asset management companies to set up a multidisciplinary investment research department.

Enhancement of Systematic Investment/Withdrawal/Transfer plans

Asset management Companies need to enhance the growth of their systematic investment plans. These plans have the capacity to deal with volatility over a long-time horizon and generate steady returns. These plans also provide platform to tiny savings of small investors into investment at regular period of intervals and also facilitate the liquidity at any stage of investment. Asset Management Companies may also provide the portability of mutual fund schemes so that an investor easily can transfer his investment from one asset management company to another on the same folio. It will help in reducing the paper work to a major extent and encourage the investors to participate in the mutual fund schemes.

Innovation

Innovation distinguishes between a leader and a follower. It is true for any industry. Over the years, different mutual fund products and services have caught investors' attention – such as fund of funds, ETFs and systematic investment plans (SIPs). The asset management industry in developed markets has a higher penetration through innovative products which offer long-term wealth creation options such as lifecycle and target maturity funds. In the US retirement industry a huge amount of corpus invested in hybrid funds (a bulk of target date and lifestyle funds are counted in this category). The nature of these products is such that the asset allocation between equity and fixed income is adjusted based on the investor's time horizon. Additionally, there are annuity products which provide regular income in the post-employment years. India too needs many more innovations in the retirement sector. According to the United Nations population statistics, India's share of people aged 65 or above is expected to increase from 5 per cent to 14 per cent between 2010 and 2050, while the share of oldest age group (80 years or above) is expected to triple from 1 per cent to 3 per cent. With only 12 per cent of India's current population under pension coverage, there is a need for innovative product in the area of retirement segment.

Technology

Investors must be aware that information on funds such as portfolio composition, return comparison with the stated benchmark and fund management details are available on Asset Management Company's websites. Transparency and easy access to funds will increase investor confidence. With more than half the country owning

mobile phones, the latter will clearly emerge as the communication medium in the years ahead. Language barriers and financial illiteracy can be reduced with multi-lingual applications that can be accessed through handheld devices and on social media. Technology will also help in straight-through processing of trades through the remotest corner of the country, besides collation and analysis of customer behavior which will help in selling mutual funds in an effective manner. Fund houses can assist clients in tracking their portfolios through intermediary platforms and wrap services (consolidates and manages an investor's portfolio or financial plans through a single window). Investors can thus view their entire portfolio at a single click, enabling them to track their current financial position on a daily basis as well as receiving alerts. They can also understand their total tax liability and maintain documentation of all purchases, sales, deposits and withdrawals in one repository.

Strengthening Corporate Governance

Institutionalization of the financial and capital market has underlined the importance of the corporate governance among asset management companies, particularly as they have a considerable influence on the market. SEBI has taken some useful steps which are not enough. It should further design a mechanism to monitor corporate governance in asset management companies, as well as appropriate penal action for any violation of the same.

Target the Global Investment

In order to increase global investment, the asset management companies must rapidly expand their overseas operations. Indian asset management companies must develop their offshore mutual funds in order to attract the foreign investment. The growth rate of India is higher comparatively to other developing nations and it is among the favorite investment destinations that provide consistent return to foreign investment. The strategy should be to focus on developing mutual fund schemes which satisfy the need of foreign investors.

LIMITATIONS OF THE STUDY

The following are the limitations of the present study:

- All the official sources, from where the data has been taken do not provide the complete data. The data available is only for the recent three or five years which is not enough to conduct a research. This study based on the data provided by corporate bodies.

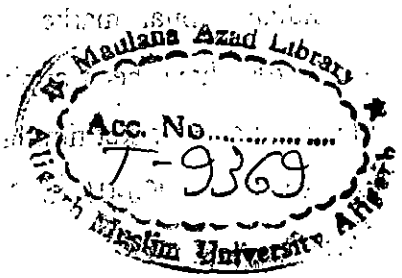
- The study is restricted to the sample of 62 mutual fund schemes related to 19 asset management companies in India.
- Some of the benchmark indexes are established after the commencement of study period. In place of such indexes S&P BSE 30 index is used as a benchmark proxy.
- This research mainly based on the secondary sources of information therefore errors of secondary data bound to be occurred.
- The implications of the performance evaluation measures have some assumption. These assumptions have to be considered while applying different models in research analysis.
- In the concentration analysis, HHI index value is shown from 2002-03 to 2013-14. The company wise data of asset under management is not available for 2000-01 and 2001-02 which is required for concentration analysis.

DIRECTIONS FOR FUTURE RESEARCH

Research is continuous process that provides opportunities for future researches. The present study is an attempt to analyze the growth and development of asset management companies in Indian capital market. Various portfolio evaluations measures and market timing models have been applied in this thesis to assess the investment performance, selectivity and market timing abilities of asset management companies in India for the period of 2000-01 to 2013-14. The scope for future research is summarized below:

- The researches may be conducted for individual sponsorship of asset management companies such as Bank sponsored asset management companies, Institution asset management companies and Private asset management companies. A comparative or case study may also be conducted on sub classification of AMC's such as JV-Predominantly Indian, JV- Predominantly Foreign, Indian companies and foreign companies.
- This study considers the classification of the schemes according to investment objective (Growth, Income and Hybrid). However research can be conducted on the different categorization such as on the basis of investor's preferences (SIP, SWP, and STP), schemes based on capitalization (Large Cap, Mid cap and Small cap) and special schemes like Exchange Traded funds, Fund of Funds, Index Funds, Money Market Funds and Offshore Funds.

- This research confine to portfolio performance measures and unconditional model of market timings, however future researches may apply conditional model of market timing, DEA techniques, Fama- French three factor models and Carhart four factor models.
- The area of research may also include the determinants not touched in this research such as impact of inflation, GDS (Gross Domestic Saving), Trade Openness and Regulations on growth and development of asset management companies in India.
- The other areas of research are the merger and acquisition within the industry and the impact of major events which took place in industry since privatization such as UTI bifurcation and regulatory reforms.



GROWTH AND DEVELOPMENT OF ASSET MANAGEMENT COMPANIES (AMC) IN INDIAN CAPITAL MARKET SINCE 2000

THESIS

SUBMITTED FOR THE AWARD OF THE DEGREE OF

Doctor of Philosophy

In

Commerce

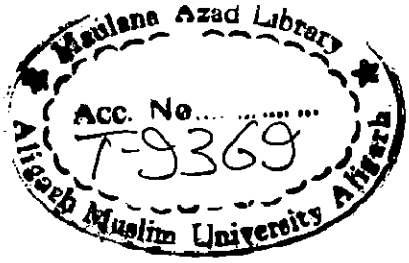
BY

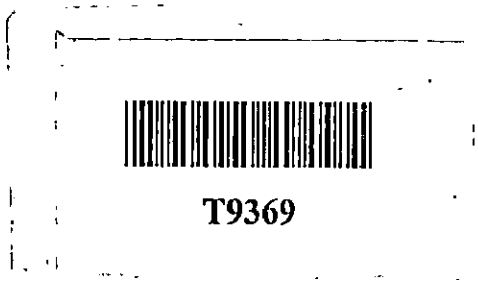
DHANRAJ SHARMA

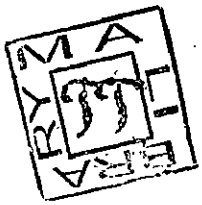
UNDER THE SUPERVISION OF

PROF. SYED HUSAIN ASHRAF

DEPARTMENT OF COMMERCE
ALIGARH MUSLIM UNIVERSITY
ALIGARH, INDIA (202002)
2015







Dedicated
To My
Beloved
Parents

CANDIDATE DECLARATION

I, **Dhanraj Sharma, Department of Commerce** certify that the work embodied in this Ph.D. thesis is my own bonafide work carried out by me under the supervision of **Prof. Syed Husain Ashraf,** Department of Commerce, Aligarh Muslim University, Aligarh. The matter embodied in this Ph.D. thesis has not been submitted for the award of any other degree.

I declare that I have faithfully acknowledged, given credit to and referred to the research workers wherever their works have been cited in the text and body of the thesis. I further certify that I have not willfully lifted up some other's work, para, text, data, result, etc. reported in the journals, books, magazines, reports, dissertations, theses, etc., or available at websites and included them in this Ph.D. thesis and cited as my own work.

Date: 21-01-15

(Signature of the Candidate)

DHANRAJ SHARMA

CERTIFICATE FROM THE SUPERVISOR

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Signature of the Supervisor

Prof. Syed Husain Ashraf
Department of Commerce
Aligarh Muslim University, Aligarh, India

CHAIRMAN
Department of Commerce
Aligarh Muslim University
ALIGARH

(Signature of the Chairman of the Department with seal)

ANNEXURE-II

COURSE/COMPREHENSIVE EXAMINATION/PRE-SUBMISSION SEMINAR COMPLETION CERTIFICATE

This is to certify that **Mr. Dhanraj Sharma,** Research Scholar, Department of Commerce has satisfactorily completed the course work/comprehensive examination and pre-submission requirement which is part of his Ph.D. programme.

Dated: 17.01.2015

(Signature of the Chairman)
CHAIRMAN
Department of Commerce
Aligarh Muslim University
ALIGARH

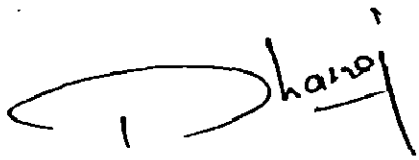
COPYRIGHT TRANSFER CERTIFICATE

Title of the Thesis: GROWTH AND DEVELOPMENT OF ASSET MANAGEMENT COMPANIES (AMC) IN INDIAN CAPITAL MARKET SINCE 2000.

Candidate's Name: DHANRAJ SHARMA

COPYRIGHT TRANSFER

The undersigned hereby assigns to the Aligarh Muslim University, Aligarh copyright that may exist in and for the above thesis submitted for the award of the Ph.D Degree.



Signature of the Candidate

Note: However, the author may reproduce or authorize others to reproduce material extracted verbatim from the thesis or derivative of the thesis for author's personal use provide that the source and the University's copyright notice are indicated.

ACKNOWLEDGEMENT

With the grace of Almighty, it's my pleasure to acknowledge all those who have helped me in carrying out this research work. It becomes my moral duty to express my gratitude to all these individuals.

At the outset, I offer my profound thanks to my supervisor, **Prof. Syed Husain Ashraf**, Department of Commerce, Aligarh Musilm University, for their expert guidance, affectionate support and relentless supervision throughout the period of my research. I am deeply indebted to him not only for creative suggestions and active support but also for teaching the real values of life. These few words only convey my formal thanks but cannot convey the depth of my gratitude to him.

I am grateful to **Prof. Mohd. Mohsin Khan,** Dean, Faculty of Commerce who has provided necessary support and facilities for undertaking my research work. I would like to express my thanks to **Prof. Sibghatullah Farooqui**, Chairman, Department of Commerce, who has motivated me continuously till the completion of the present study. I am intensely grateful to him.

A study like this is never an outcome of efforts put in by a single person, rather it bears an imprint of a number of persons who have helped in completing the research. I am thankful to **Prof. Badar Alam Iqbal,** former Dean & Chairman, Department of Commerce, AMU and **Prof. Aziz Khan** (Retd.), JNMC, AMU for their constant encouragement and support at different stages of my research.

I am deeply indebted to the **Department of Commerce, Aligarh Muslim University** for selecting me and providing me an opportunity to pursue my graduation, post graduation and doctoral research. I also sincerely acknowledge to all my teachers from whom I have learnt a lot during my studies.

I owe a special word of appreciation to **Dr. Vedram Sharma** (Nanaji), Retd. Associate Professor, Agra University, for his constant source of inspiration. I would like to thank my father **Mr. Chandra Mohan Sharma** and my mother **Mrs. Roopam Sharma** for their unfailing support. I believed that it is their sincere prayers that have really done wonders for the completion of this work. I feel highly privileged to express my heartiest gratitude to my elder brothers **Mr. Tarun Sharma, Mr. Arun Sharma** and sister in law **Mrs. Vinita Sharma, Mrs. Preeti Sharma.** The unconditional love and unending support of my family has been a major factor in giving me the strength of mind to complete my study. I owe my most loving thanks to

my niece **Bhavyata, Tunika** and **Meetal** who are always with me. Thanks are also due for my dear friends **Mr. Rohit Kela, Mr. Chandra Kant Sharma, Mr. Pushpender Kumar, Mr. Shivam Jindal, Mr. Nitin Bharadwaj, Mr. Saurabh Kumar** and **Mr. Hemant Varshney** for stood by me through all the difficult situations.

I take this opportunity to thank my seniors **Dr. Amit Varshney, Dr. Naushad Alam** and research fellows **Dr. Syed Mohd Taqi Rizvi, Ms. Fozia Razzaq, Dr. Nazneen Shahid, Ms. Sabiha Usman, Dr. Hemkant Kulshreshta, Mr. Girsh Kumar, Dr. Bhawana Rawat, Mrs. Sumbul Kabir, Mr. Shahfaraz Khan, Mr. Azeem Ahmad Khan, Mr. Azam Malik, Dr. Sana Rahman and Dr. Sana Ikram** for their valuable suggestions and kind cooperation. Though, it is not possible to thank each one of them individually. I would like to thank many friends and colleagues for their moral support in bringing out this research.

I wish to record my sincere thanks to the office of the Faculty/Department of Commerce, Seminar Library and Computer Lab. for their administrative assistance and help throughout my Ph.D. program.

Finally, I would like to say that while I share my achievement with all those mentioned above, I take the sole responsibility for any shortcoming.

(DHANRAJ SHARMA)

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF GRAPHS

LIST OF ABBREVIATION

ADR	American Depository Receipts
AMC	Asset management Company
AMFI	Association of Mutual Funds in India
ANOVA	Analysis of Variance
APB	Active Peer Benchmark
ASBA	Application Supported by Blocked Amount
ASE	Athens Stock Exchange
AUM	Asset Under Management
BOLT	BSE On-Line Trading System
BOPF	Beneficial Owners Protection Fund
BSE	Bombay Stock Exchange
CAGR	Compound Annual Growth Rate
CAPM	Capital Asset Pricing Model
CEF	Closed End Funds
CIS	Collective Investment Schemes
CM	Conditional Model
CML	Capital Market Line
CNX	CRISIL NSE Index
CRISIL	Credit Rating Information Services of India Limited
CRSP	Centre for Research in Security Prices
DCFS	Deloitte Centre for Financial Services
DEA	Data Envelopment Analysis
DEMAT	Dematerialized Account
DIP	Disclosure and Investor Protection
DMA	Direct Market Access
DSE	Dhaka Stock Exchange
EAFE	Europe, Australia and Far East
ECB	External Commercial Borrowings
ELSS	Equity Linked Saving Schemes
EPS	Earning Per Share
ESDAR	Excess Standard Deviation Adjusted Returns
ETF	Exchange Traded Funds

ETN	Exchange Traded Notes
F&O	Futures & Options
FATF	Financial Action Task Force
FCCB	Foreign Currency Convertible Bonds
FCD	Fully Convertible Debentures
FII	Foreign Institutional Investors
FOF	Fund of Funds
FPO	Follow on Public Offer
FSDC	Financial Stability and Development Council
FSLRC	Financial Sector Legislative Reforms Commission
GDP	Gross Domestic Product
GDR	Global Depository Receipts
GDS	Gross Domestic Saving
HDFC	Housing Development Finance Corporation
HHI	Herfindahl-Hirschman Index
HNI	High Net Worth Individuals
HSBC	Hongkong and Sanghai Banking Corporation
IBRA	Indonesia Bank Reconstructing Agency
ICB	Investment Corporation of Bangladesh
ICDR	Issue of Capital and Disclosure Requirements
ICI	Investment Company Institute
ICICI	Industrial Credit Investment Corporation of India
IDBI	Industrial Development Bank of India
IEPF	Investor Education and Protection Fund
IIFA	International Investment Funds Association
IISL	India Index Services and Products Ltd
IMA	Investment Management Agreement
ING	International Netherlands Groups
IOSCO	International Organization for Securities Commissio
IPO	Initial Public Offer
IRDA	Insurance Regulatory and Development Authority
ISC	Investor Service Centre
ISMR	Indian Security Market Review
IT	Information Technology

JV	Joint Venture
KAMCO	Korea AMC
L&T	Larsen and Toubro
LIC	Life Insurance Corporation
LPM	Lower Partial Moment
MBS	Mortgage Backed Securities
MF	Mutual Funds
MMMF	Money Market Mutual Funds
MNC	Multi National Corporation
MRAP	Market Risk Adjusted Performance
MSCI	Morgan Stanley Capital International
NAV	Net Asset Value
NCD	Non-Convertible Debentures
NCR	National Capital Region
NEAT	National Exchange for Automated Trading
NPL	Non Performing Loan
NPS	New Pension Scheme
NSCCL	National Securities Clearing Corporation Limited
NSDL	National Securities Depository Limited
OTCEI	Over the Counter Exchange of India
PACRA	Pakistan Credit Rating Agency
PCD	Partly Convertible Debentures
PF	Provident Fund
PFRDA	Pension Fund Regulatory and Development Authority
QII	Qualified Investment Funds
Q-Q	Quantile- Quantile
R&T	Registrar and Transfer Agent
RAP	Risk Adjusted Performance
RBI	Reserve Bank of India
REITS	Real Estate Investment Trusts
RTA	Registrar and Transfer Agent
S&P	Standard and Poor
SBI	State Bank of India
SBTS	Screen Based Trading System

SC(R)A	Securities Contracts (Regulation) Act
SEBI	Securities and Exchange Board of India
SIP	Systematic Investment Plan
SML	Security Market Line
SPN	Secured Premium Notes
SRI	Socially Responsible Investment
SRM	Spearmen Rank Non-Parametric Method
STP	Systematic Transfer Plan
STT	Securities Transaction Tax
SWM	Shareholder's Wealth Maximisation
SWP	Systematic Withdrawal Plan
T- Bills	Treasury Bills
TAMCO	Thai Asset Management Company
TISCO	Tata Iron and Steel Company Limited
TWR	Time Weighted Return
UK	United Kingdom
USA	United States of America
UTI	Unit Trust of India
VaR	Value at Risk
VCF	Venture Capital Funds
VIX	Volatility Index
WDM	Wholesale Debt Market
WEF	World Economic Forum
WFE	World Federation Exchange

Chapter-1

INTRODUCTION AND RESEARCH DESIGN OF THE STUDY

1.1 INTRODUCTION

Investment could be associated with the different activities, but the common target in these activities is to employ the money during the time period seeking to enhance the wealth of investor. Funds to be invested come from assets already owned, borrowed money and savings. By foregoing consumption today and investing their savings, investors expect to enhance their future consumption possibilities by increasing their wealth. But it is useful to make a distinction between real and financial investments. Real investments generally involve some kind of tangible asset, such as land, machinery, factories, etc. Financial investments involve contracts in papers or electronic form such as stock, bonds etc. Corporate finance is also concerned with how to allocate the profit of the firm among shareholders (through the dividend payments), the government (through tax payments) and the firm itself (through retained earnings). But one of the most important questions for the company is financing. Modern firms raise money by issuing stocks and bonds. These securities are traded in the financial markets and the investors have possibility to buy or to sell securities issued by the companies. Thus, the investors and companies, searching for financing, realize their interest in the same place – in financial markets. Corporate finance area of studies and practice involves the interaction between firms and financial markets and investments area of studies and practice involves the interaction between investors and financial markets.

Investments field also differ from the corporate finance in using the relevant methods for research and decision making. Investment problems in many cases allow for a quantitative analysis and modeling approach and the qualitative methods together with quantitative methods are more often used analyzing corporate finance problems. But at the same time both Corporate Finance and Investments are built upon a common set of financial principles, such as the present value, the future value, the cost of capital). And very often investment and financing analysis for decision making use the same tools, but the interpretation of the results from this analysis for the investor and for the financier would be different.

Investors can use direct or indirect type of investing. Direct investing is realized using financial markets and indirect investing involves financial intermediaries. The primary difference between these two types of investing is that applying direct

investing investors buy and sell financial assets and manage individual investment portfolio themselves. Consequently, investing directly through financial markets investors take all the risk and their successful investing depends on their understanding of financial markets, its fluctuations and on their abilities to analyze and to evaluate the investments and to manage their investment portfolio. Contrary, using indirect type of investing investors are buying or selling financial instruments of financial intermediaries (financial institutions) which invest large pools of funds in the financial markets and hold portfolios. Indirect investing relieves investors from making decisions about their portfolio. As shareholders with the ownership interest in the portfolios managed by financial institutions (investment companies, pension funds, insurance companies, commercial banks) the investors are entitled to their share of dividends, interest and capital gains generated and pay their share of the institution's expenses and portfolio management fee. The risk for investor using indirect investing is related more with the credibility of chosen institution and the professionalism of portfolio managers. In general, indirect investing is more related with the financial institutions which are primarily in the business of investing in and managing a portfolio of securities (various types of investment funds or investment companies, private pension funds). By pooling the funds of thousands of investors, those companies can offer them a variety of services, in addition to diversification, including professional management of their financial assets and liquidity *(Levisauskait K. 2010, p.8)*.

The Collective Investment Scheme (CIS) serves as an investment vehicle for a wide range of investment opportunities around the world. International Organization for Securities Commission (IOSCO) defined collective investment schemes as 'an open ended collective investment scheme that issues redeemable units and invests primarily in transferable securities or money market instruments'. It excludes investing in property, real estate, mortgages or venture capital. Millions of people in the world have invested in collective investment schemes and rely upon operators to manage their funds and to act in the best interest of investors. This trend is continuing, particularly in the light of the growth of pension and retirement funds as a preferred investment vehicle for many investors. The distribution of CIS products has continued to develop across borders and operators are seeking to maximize their opportunity by

utilizing management, administration and custody services in different jurisdictions *(National Stock Exchange, 2013, p. 41)*.

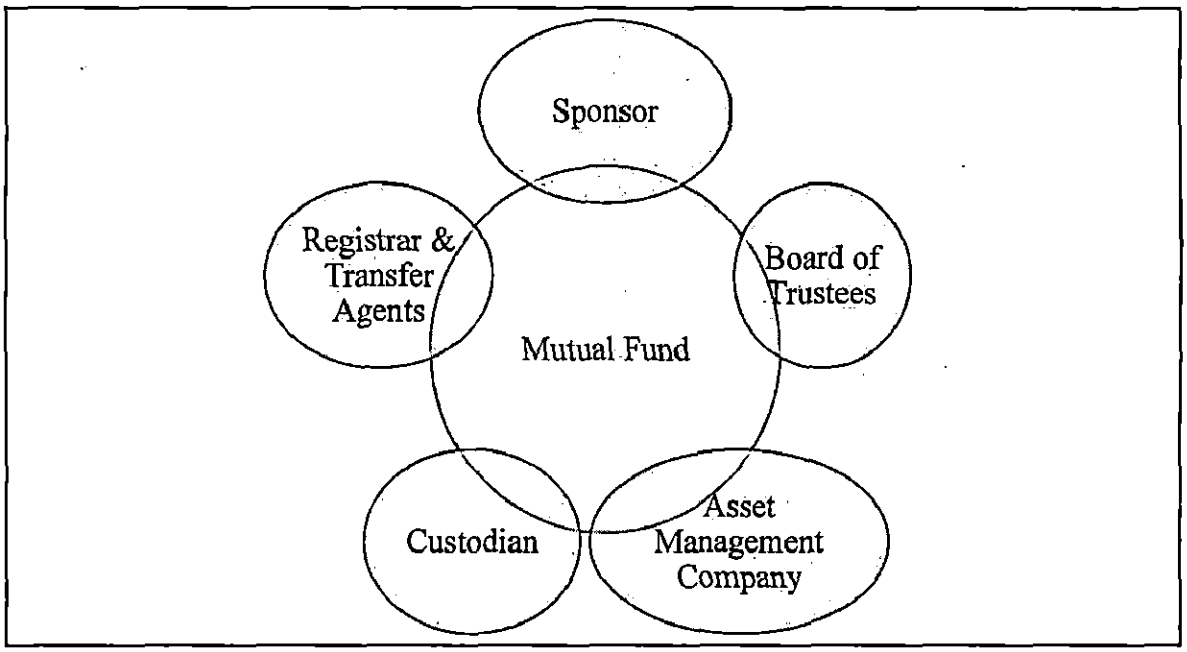
In India there are three distinct categories of collective investment vehicles in operations namely, Mutual Funds (MFs), Collective Investment Schemes (CIS) and Venture Capital Funds (VCFs) which mobilize resources from the market for investment purposes. A mutual fund is a financial intermediary which acts as an instrument of investment. It collects funds from different investors to a common pool of investible funds and then invests these funds in a wide variety of investment opportunities. Small investors who unable to participate in capital market, can assess the stock market through the medium of mutual funds which can manage their funds for maximizing returns. The investment may be diversified to spread risk and to ensure a good return (dividend or capital gain or both) to the investors. The mutual funds employed professional experts called asset management companies that manage and conduct the investment analysis and then select the portfolio of securities where the funds are to be invested. U.S. Securities and Exchange Commission define mutual Fund as a form of collective investment that pools money from many investors and invests the money in stocks, bonds, short-term money market instruments, and/or other securities (*Kamble R. M., 2013, p. 1*). Some of the features of the mutual funds are:

- Mutual fund is a pool of financial resources. Investor brings their individual funds together. Sometimes, the funds which otherwise may not come for investment in the capital market, are invested through mutual funds.
- Mutual funds are professionally managed. The resources collected by mutual funds are managed by professional asset management companies which are expert in investment. These companies can undertake specialized investment analysis such as fundamental analysis, technical analysis etc which are not otherwise expected on the part of individual investors.
- Mutual fund is an indirect investment. The individual investors invest in mutual fund which in turn invests in shares, debenture and other securities in the capital market. The proportionate funds given by investors are represented by the units of mutual funds. Investors own these units and the securities are owned by the mutual funds. Investors have no direct claim on these securities.

- Investment in mutual funds is not a borrowing lending relationship. Investors do not lend money to the mutual funds, rather they invest. In fact, the investors own mutual funds. Consequently the investors have to share gains or loss in operation of the mutual funds.
- Mutual fund is a representative of investors. The mutual funds collect the funds from investors under a particular investment scheme. As a representative, the mutual fund has to invest these funds as per the designated scheme only.

In a nutshell, a mutual fund mobilizes the savings of a large number of small investors and invest the amount in common investment. Investors get the benefit of diversifying their portfolio and experience the professional services of asset management companies to make the best investment opportunities *(Rustagi R.P. 2008, p.70)*.

Figure-1.1 Structure of Mutual Funds



Source: Association of Mutual Funds in India

The structure of the mutual fund is categorized in the following constituents:

Sponsor

Sponsor of a mutual fund is akin to the promoter of a company as he gets the fund registered with SEBI. Under SEBI regulations, sponsor is defined as any person who acting alone or in combination with another body corporate establishes the mutual fund. Under the Indian trust act 1882, a sponsor creates mutual fund trust, which is the main body in creation of mutual funds.

Board of Trustees

Trustees may be appointed as an individual or as a trustee company with the prior approval of SEBI. According to SEBI regulations, 1996, trustees mean board of

trustees or Trustee Company who hold the property of mutual fund for the benefit of the unit holders. SEBI requires that each mutual fund shall have a custodian who is independent and registered with it. SEBI regulations provide for the appointment of a custodian by trustees of the mutual fund who are responsible for carrying on the activities of safe keeping of securities and participating in any clearing system on behalf of mutual fund.

Asset Management Company (AMC)

A mutual fund is set up as a trust which has a sponsor AMC. An asset management company is a legal entity formed by the sponsor to run the mutual fund. The asset management company must be registered by SEBI. It manages the funds of the mutual fund schemes by making investment in various types of securities.

Custodian

Though the securities are bought and held in the name of trustees, they are not kept with them. The responsibility of safe keeping the securities is on the custodian. Securities, which are in material form, are kept in safe custody of a custodian and securities, which are in 'De-Materialized' form, are kept with a Depository participant, who acts on the advice of custodian. They ensure that delivery has been taken of the securities, which are bought, and that they are transferred in the name of the mutual fund. They also ensure that funds are paid out when securities are bought.

Registrar & Transfer (R&T) Agents

Registrar and transfer (R&T) agents are responsible for creating and maintaining investor records kept in numbered account called folios and servicing them. They accept and process investor transactions and also operate Investor Service Centres (ISCs) which acts as official points for accepting investor transactions with a fund.

Global Asset Management Industry

Asset management Companies have been among the largest financial intermediary in the international financial markets for the last 25 years. They held a large portion of pooled asset and invest these assets in financial securities like equities and debt instrument. Asset Management Companies do business in a turbulent markets and complex regulatory reform. In this kind of environment, a trusted advisor with a balanced, comprehensive and international perspective can be an invaluable resource.

Table - 1.1 Trends of Global Asset Management Industry

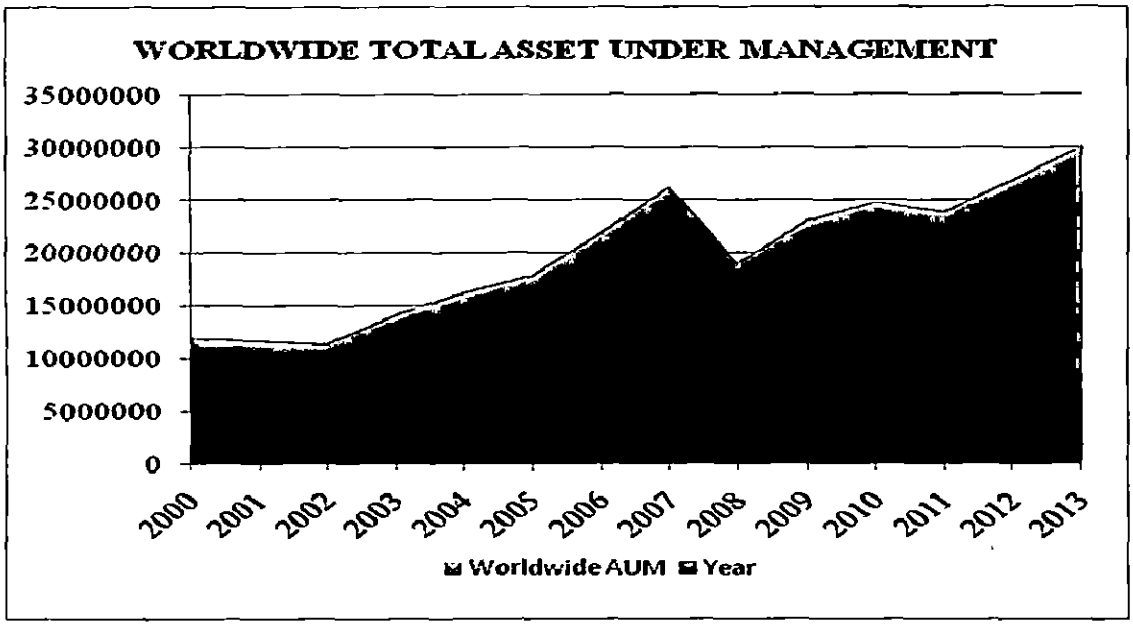
(AUM in US$ Million)

Year	Asset under management	Growth (in %)	No. of Schemes
2000	11871028	0.92	51692
2001	11654866	-1.82	52849
2002	11324128	-2.84	54110
2003	14048311	24.06	54569
2004	16164793	15.07	55224
2005	17771027	9.94	56868
2006	21808826	22.72	61584
2007	26129767	19.81	66344
2008	18918982	-27.60	69029
2009	22945327	21.28	67526
2010	24709854	7.69	69486
2011	23795808	-3.70	72600
2012	26835850	12.78	73229
2013	30049934	11.98	76200
Average	19319389.73	7.87	62270.4
S.D.	6335911.19	14.00	8698.84
Maximum	30049934	24.05	76200
Minimum	11324128	-27.59	51692

Source: ICI- Fact book 2014 and IIFA- Industry Statistics.

Table 1.1 is based on the fact book released by Investment Company Institute (ICI) which release the statistics annually (January- December) basis. The latest statistics on global assets under management confirm the steady recovery of the investment management industry since the financial crisis. ICI Assets under management are at US$ 30.01 trillion at the end of 2013, with an increasing contribution to growth of 11.98 per cent as compared to last year. The highest growth rate of 24.05 per cent was registered in 2003 and lowest growth rate of (27.59) per cent was registered in 2008 due to the global financial crisis. The average growth rate of the global asset management industry is 7.87 per cent during the research period. The number of mutual fund schemes increased from 73229 in 2012 to 76200 in 2013.

Graph - 1.1 Trends of Global Asset under Management



Source: ICI- Factbook 2014 and IIFA- Industry Statistics

Graph 1.1 depicts the trend of global asset under management from 2000 to 2013. It was US$ 11.87 million at the end of 2000 and touched US$ 30.01 million at the end of 2013. It can be observed from the graph that global asset management industry witnesses up and down trend during the study period.

Table - 1.2 Global Asset Management Industries- Region-Wise

(AUM in US$ Million)

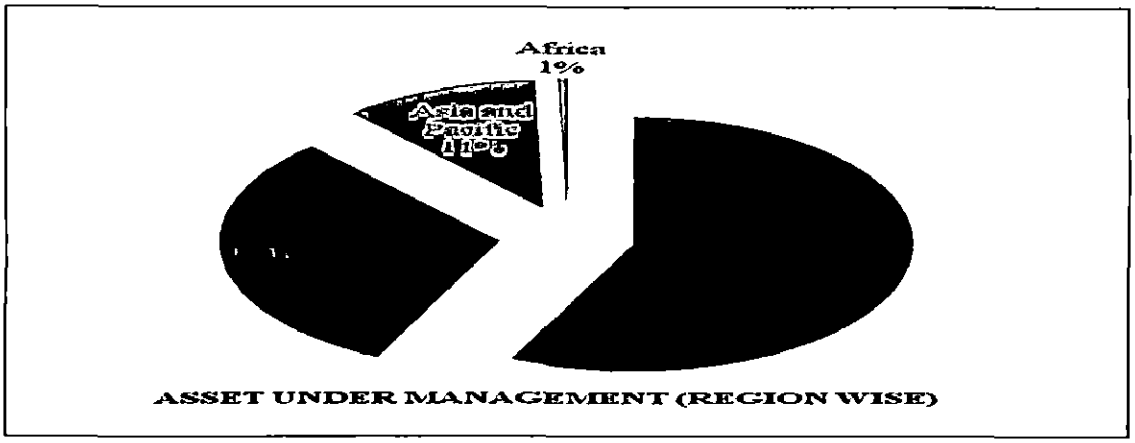
REGION	Asset Under Management		No. of Schemes	
	2000	2013	2000	2013
America	7424112	17156409	12676	22020
Europe	3296016	9374830	25524	34743
Asia and Pacific	1133979	3375828	13158	18375
Africa	16921	142868	334	1062
World	**11871028**	**30049934**	**51692**	**76200**

Source: ICI- Factbook 2014 and IIFA- Industry Statistics

Table 1.2 shows a comparison between the region wise assets under management in 2000 and 2013 in terms of asset under management and number of schemes. The America region has the largest contribution in the AUM and number of schemes it hold are worth US$ 17.15 million of AUM and 22020 of mutual fund schemes at the end of 2013. The America region is followed by Europe, Asia and Pacific and Africa.

The AUM of the Asia Pacific was US$ 3.3 million at the end of 2013 which increased by 3 times as compare to AUM of 2000. The total number of schemes was 18375 at the end of 2013. These statistics show the increasing dominance of the emerging market of Asia Pacific in the global asset management industry.

Graph - 1.2 Shares of Regions in Asset under Management



Source: ICI- Factbook 2014 and IIFA- Industry Statistics
Note- Share in %, at the end of 2013.

Graph 1.2 represents the proportionate share of the entire region in asset management industry. The America contributes 57 per cent of the total global asset under management followed by Europe with 31 per cent, Asia and Pacific with 11 per cent and Africa with 1 per cent at the end of 2013.

Table - 1.3 International Comparison of Asset Management Industry of Major Countries

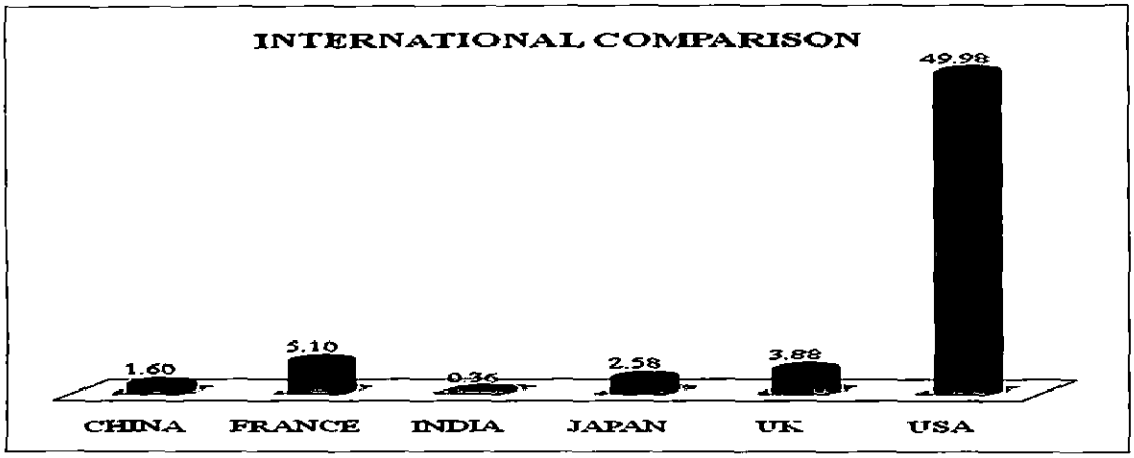
(AUM in US$ Million)

Country	Asset Under Management		CAGR	No. of Schemes	
	2000	2013	(2000-2013)	2000	2013
CHINA	NA	479957	NA	NA	1415
FRANCE	721973	1531500	5.96	7,144	7154
INDIA	13507	107895	17.33	234	699
JAPAN	431996	774126	4.59	2,793	4922
UK	361008	1166834	9.44	1,766	1910
USA	6964634	15017682	6.09	8,155	7707
WORLD	**11871028**	**30049934**	**7.41**	**51,692**	**76200**

Source: ICI- Factbook 2014 and IIFA- Industry Statistics

Table 1.3 represents the international comparison among the major developed and developing countries. One of the interesting fact found from this table is that India accounted for only 0.36 per cent of the global asset management industry but at the same time India witnessed the higher Compound Annual Growth Rate (CAGR) for the period from 2000 to 2013 i.e. 17.33 per cent. It shows the asset management industry is one of the fastest growing and emerging industries around the world since 2000. After India, UK enjoys the second highest CAGR showing a figure of 9.44 per cent followed by USA with CAGR of 6.09 per cent, France with CAGR of 5.96 per cent and JAPAN with a CAGR of 4.59 per cent. As the data available for China from 2007 to 2013, the CAGR of the China is 1.69 per cent.

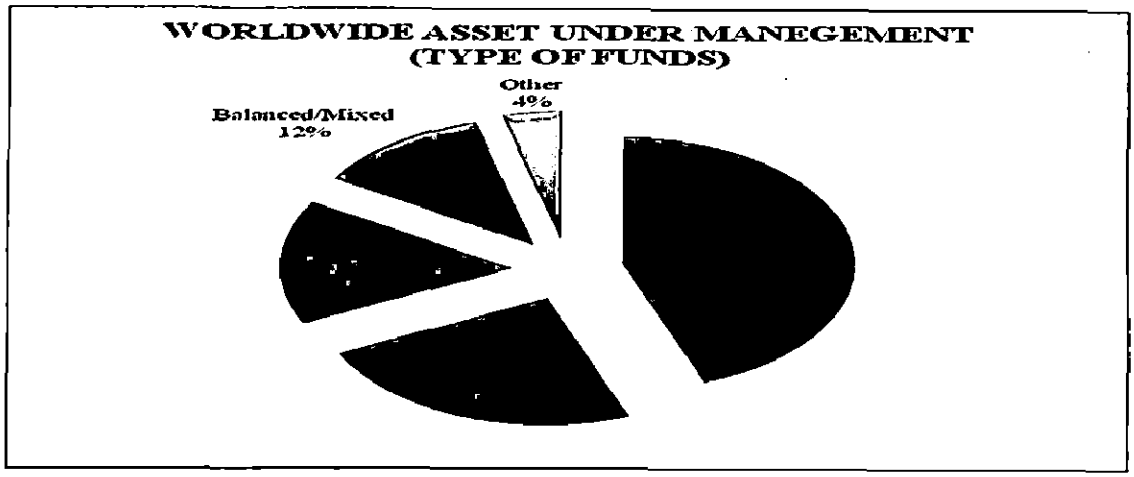
Graph - 1.3 Share in Asset under Management of major countries



Source: ICI- Factbook 2014 and IIFA- Industry Statistics
Note- AUM in per cent as a share of Global AUM at the end of 2013.

USA is the largest asset management industry managing the corpus of US$ 15.01 trillion at the end of 2013 and contributes half of the share in global asset under management. The share of France is 5.10 per cent, UK 3.88 per cent, Japan 2.58 per cent, China 1.6 per cent and the share of India is 0.36 per cent of the global asset under management at the end of 2013. These six countries contribute to 63.50 per cent of the total global asset under management at the end of 2013.

Graph 1.4 Global Asset Management Industries (Scheme Wise)



Source: ICI- Factbook 2014 and IIFA- Industry Statistics

Graph 1.4 shows the scheme wise distribution of global asset under management at the end of 2013. It is clear from the graph that majority of the asset under management invested in equity funds i.e. 44 per cent. It is because of better return provided by the equity schemes in long run. In other schemes, share of bond schemes is 24 per cent, share of money market scheme is 16 per cent, balanced and mixed schemes accounted for 16 per cent and other schemes contributed 4 per cent in asset under management held by global asset management industry.

1.2 STATEMENT OF THE PROBLEM

India steadily emerged as a center of attractive investment opportunities, owing to high GDP growth rate and rising level of per capita income. The asset management industry is one of the fast growing sectors in India since economic reforms in 1991.The asset management industry has registered significant growth during the last decade and has emerged as an important financial intermediary. The growing importance of the industry may be observed in terms of increasing asset under management. The financial savings of the households in India and the savings of the private corporate sector form the main source of funds for the asset management industry. The asset under management (AUM) of Indian asset management companies increased from Rs. 90587 crore (3.85 per cent of the GDP) in 2000-01 to Rs. 905120 crore (15.74 per cent of the GDP) in 2013-14. The growth of the industry provide wide variety of investment option to the investors since there are 1638 mutual fund schemes at the end of March 2014. The penetration of the industry also shows the remarkable growth over the period of time. There is a need to conduct research to

know the efficiency and true competency of the asset management companies, especially by evaluating the performance of these companies in terms of market timing abilities and comparing the performance of managed schemes with benchmark index by using different portfolio evaluation measures. There is a need of comprehensive research which provides an empirical analysis related to performance of asset management companies. It will help investors, regulators, fund managers and other participants in better decision making.

1.3 RESEARCH GAP

From the comprehensive literature review of earlier studies, it is found that a very few research has been conducted to find out the growth and development of asset management companies in India. The available literature provide details about the performance evaluation measures to assess the growth and development of asset management companies in India. The present study differs from the earlier studies on the following aspects:

- This study fills the gap in the literature of the performance of asset management companies by conducting investment performance measure and market timing models which has been rarely examined in any developing country.
- The present study covers a detailed theoretical and analytical research for the period of recent fourteen years ranging from 2000-01 to 2013-14 regarding growth and development of asset management industry in Indian context.
- In the previous studies, relatively small sample sizes have been taken to conduct the research. Such small samples may not provide meaningful inferences and the result cannot be generalized. To overcome this limitation, the present study is based on 62 sample mutual fund schemes operating during the entire study period. It used daily NAV data for measuring fund performance of sample mutual fund schemes rather than weekly and monthly NAV data taken in earlier research.
- This study differs from earlier studies as it categorize the results on the basis of institution sponsorship (Bank Sponsored, Institution and Private asset management companies) and investment objective (Growth, Hybrid and Income Schemes).
- Earlier studies did not assess the impact of important determinants on the growth of asset management companies and do not provide the comparative study between public and private asset management companies.

- The study also evaluates the performance of asset management companies during the pre and post financial crisis period which was uncovered area. The market competitiveness of the asset management companies is not taken into consideration in previous research.

1.4 SCOPE OF THE STUDY

The present study would cover period from 2000-01 to 2013-14, a period of 14 years to assess the growth and development of the asset management companies in general and the investment performance of sample mutual fund schemes managed by asset management companies in particular. The study relates to 62 mutual fund schemes affiliated to 19 asset management companies. All the schemes in the sample have been in operation during the study period. The various benchmark indexes have been used by the researcher to compare the performance of sample mutual fund schemes. The study has used the daily yield of 91 day Treasury bills (T-Bills) as a proxy of risk free rate of return. The results are classified on the basis of sponsorship institutions (Bank Sponsored, Institutions and Private Asset Management Companies) and investment objective (Growth, Hybrid and Income schemes).

1.5 OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

- To evaluate the investment performance of sample schemes managed by asset management companies along with benchmark index by using different portfolio measurement techniques.
- To examine the stock selection and market timing abilities of asset management companies in India.
- To analyze the impact of specific determinants on the growth of asset management companies in India.
- To compare the performance of public sector asset management companies with private sector in India.
- To trace out the performance of asset management companies during the pre and post financial crisis period.
- To assess the market competitiveness of the asset management companies in India during study period.

1.6 TESTABLE HYPOTHESES

The present study is an attempt to test the following hypotheses in order to evaluate performance of asset management companies:

Null Hypothesis 1

The investment performance of mutual fund schemes managed by asset management companies is not providing consistent risk adjusted return to unit holders in Indian capital market.

Alternate Hypothesis 1

The investment performance of mutual fund schemes managed by asset management companies is providing consistent risk adjusted return to unit holders in Indian capital market.

Null Hypothesis 2

The asset management companies in India are not having any specific investment strategy to time the market.

Alternate Hypothesis 2

The asset management companies in India are having specific investment strategy to time the market.

Null Hypothesis 3

There is no significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of asset management companies in India.

Alternate Hypothesis 3

There is a significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of asset management companies in India.

Null Hypothesis 4

There is no significant difference in the AUM of public sector and private sector asset management companies in India.

Alternate Hypothesis 4

The AUM of Private sector Asset Management Companies is significantly improved as compare to public sector in India.

Null Hypothesis 5

There is no significant difference in the size of corpus of asset management companies in Pre and Post Financial Crisis period.

Alternate Hypothesis 5

There is a significant difference in the size of corpus of asset management companies in Pre and Post Financial Crisis period.

Null Hypothesis 6

The market competitiveness is lacking among the asset management companies in India.

Alternate Hypothesis 6

There is market competitiveness among the asset management companies in India.

1.7 RESEARCH METHODOLOGY

Research Methodology is an important part of the research. It includes the criteria of sample selection, sources of data collection and various tools applied in the study for analysis which is discussed as here under:

Sample Schemes

The samples of mutual fund schemes are selected on the basis of schemes operating in the entire study period. First the asset management companies are selected which are in operation from 2000-01 to 2013-14. Than schemes are identified which are operating during the whole study period for selected companies. The study used a sample of 62 mutual fund schemes which belong to 19 Asset Management Companies, related to Bank sponsored, Institution and Private asset management companies. While 7 schemes from three Bank sponsored companies, 4 schemes from one Institution companies and 51 schemes have taken from fifteen private asset management companies. Investment objective wise classification of the 62 schemes involves 36 growth schemes, 14 hybrid schemes and 12 income schemes. The details relating to the sample schemes and their respective benchmark index are given in Table 1.4. For the convenience in analysis, code is allotted to the sample mutual fund schemes and benchmark index which is also shown in the Table 1.4.

Table 1.4 Description of sample mutual fund schemes and Benchmark Index

Mutual Fund Scheme	Code	Benchmark	Code
Baroda Pioneer Equity Linked Saving Scheme 96	1	S&P BSE Sensex	R
Birla Sun Life 95 – Growth	2	S&PBSE Sensex	R
Birla Sun Life Advantage Fund – Growth	3	S&P BSE 200	O
Birla Sun Life Buy India Fund – Growth	4	S&P BSE 200	O
Birla Sun Life Gilt Plus Liquid Plan – Growth	5	S&P BSE Sensex	R
Birla Sun Life Gilt Plus PF Plan – Growth	6	S&P BSE Sensex	R
Birla Sun Life Income Plus – Growth	7	S&P BSE Sensex	R
Birla Sun Life India Opportunities Fund – Growth	8	CNX 500	A
Birla Sun Life MNC Fund – Growth	9	CNX MNC	E
Birla Sun Life Monthly Income Plan – Growth	10	S&P BSE Sensex	R
Birla Sun Life New Millennium – Growth	11	S&P BSE Teck	S
CanaraRobeco Gilt PGS- Growth	12	S&P BSE Sensex	R
CanaraRobeco Monthly Income Plan – Growth	13	S&P BSE Sensex	R
DSP BlackRock Balanced Fund – Growth	14	S&P BSE Sensex	R
DSP BlackRock Bond Fund - Retail Plan – Growth	15	S&P BSE Sensex	R
Escorts Income Plan – Growth	16	S&P BSE Sensex	R
Franklin India Bluechip– Growth	17	S&P BSE Sensex	R
Franklin India Opportunity Fund – Growth	18	S&P bse 200	O
Franklin India Prima Plus – Growth	19	CNX 500	A
Franklin Infotech Fund – Growth	20	S&P BSE IT	P
Franklin Templeton India Balanced Fund – Growth	21	S&P BSE Sensex	R
Templeton India Pension Plan – Growth	22	S&P BSE Sensex	R
HDFC Equity Fund – Growth	23	CNX 500	A
HDFC High Interest Fund- Dynamic Plan – Growth	24	S&P BSE Sensex	R

HDFC Prudence Fund – Growth	25	S&P BSE Sensex	R
HDFC Tax Saver – Growth	26	CNX 500	A
HDFC Top 200 – Growth	27	S&P BSE 200	O
ICICI Prudential Balanced – Growth	28	S&P BSE Sensex	R
ICICI Prudential FMCG – Growth	29	CNX FMCG	C
ICICI Prudential Technology Fund – Growth	30	S&P BSE IT	P
ICICI Prudential Top 100 Fund – Cumulative	31	CNX Nifty	F
ICICI Prudential Top 200 Fund – Growth	32	S&P BSE 200	O
ING Core Equity Fund – Growth	33	S&P BSE 200	O
ING Income Fund - Regular Plan – Growth	34	S&P BSE Sensex	R
JM Balanced – Growth	35	S&P BSE Sensex	R
JM Equity – Growth	36	S&P BSE Sensex	R
Kotak 50 – Growth	37	CNX Nifty	F
Kotak Balance – Growth	38	S&P BSE Sensex	R
Kotak Bond Deposit – Growth	39	S&P BSE Sensex	R
L & T Triple Ace - Regular – Growth	40	S&P BSE Sensex	R
L & T Ultra Short Term Fund - Regular – Growth	41	S&P BSE Sensex	R
LIC Nomura Bond Fund – Growth	42	S&P BSE Sensex	R
LIC Nomura Equity Fund	43	S&P BSE Sensex	R
LIC Nomura MF Growth Fund – Growth	44	S&P BSE Sensex	R
LIC Nomura Tax Plan	45	S&P BSE Sensex	R
PRINCIPAL Balanced Fund – Growth	46	S&P BSE Sensex	R
PRINCIPAL Index Fund – Growth	47	CNX Nifty	F
Reliance Growth – Growth	48	S&P BSE 100	N
Reliance Vision – Growth	49	S&P BSE 100	N
SBI Magnum Balanced Fund – Growth	50	S&P BSE Sensex	R

SBI Magnum Equity Fund – Growth	51	CNX Nifty	F
SBI Magnum Multiplier Plus 93 – Growth	52	S&P BSE 200	O
SBI Magnum Tax Gain Scheme 93 – Growth	53	S&P BSE 100	N
Sundaram Growth Fund – Growth	54	S&P BSE 200	O
Tata Balanced Fund – Growth	55	S&P BSE Sensex	R
Tata Ethical Fund - Appreciation (Formerly Select Equity Fund)	56	S&P BSE Sensex	R
Tata Pure Equity Fund – Growth	57	S&P BSE Sensex	R
Tata Tax Saving Fund	58	S&P BSE Sensex	R
Tata Young Citizens Fund	59	S&P BSE Sensex	R
Taurus Bonanza Exclusive Growth Scheme 95	60	S&P BSE 100	N
Taurus Discovery Fund – Growth	61	S&P BSE Sensex	R
Taurus Starshare Fund – Growth	62	S&P BSE 200	O

Source: Researcher Compilation

The choice of the sample mutual fund schemes is largely been guided by the fact that sufficient information is available for the schemes and the sample is representative of all investment objective and institution sponsorship of the industry. In some cases the data is not available for benchmark index. The reason being index was launched after the starting period of the study. For such schemes S&P BSE Sensex is taken as benchmark index.

Risk Free Rate (R_f)

There has been a controversy as to what constitutes risk free assets. Generally treasury bills of different durations have been used as a surrogate for risk free assets in earlier studies conducted. In this study, the daily yields on 91-day U.S. treasury bills (T-bills) have been used to surrogate for risk free rate of return as has been done by most of the researchers. The data has been collected from the website of U.S. Treasury from April 2000 to March 2014.

Sources of Data

The study employed the secondary sources of data. For evaluating the performance of sample mutual fund schemes the historical Net Asset Value (NAV) is taken into consideration. Therefore, in the study daily NAV have been used for all the schemes for the period from April 2000 to March 2014. The data have been collected from the various websites such as SEBI, AMFI, Value Research India, R.R. Finance and respective websites of mutual funds. In order to have a meaningful evaluation, the schemes are comparing with their respected benchmark portfolios. The closing value of respected benchmark indexes is also used to calculate the daily market return in the above mention period. The data has been collected from the respective websites of benchmark index. The daily change is observed for the sample mutual fund schemes, market index and 91 days T- bills for the above mention period. There were missing observations for some of the sample mutual fund schemes, resulting different number of observations for different schemes. The data of asset under management is taken from the various reports of AMFI.

Techniques applied in Research

The various tools and techniques used in research are classified in investment performance measures and statistical techniques. The tools are -

Return

The average return on the sample mutual fund schemes has been worked out using the daily return series by the following.

$$Return = (NAV_t - NAV_{t-1}) / NAV_{t-1}$$

where, NAV_t is Net Asset Value of a mutual fund scheme for a day t, NAV_{t-1} is the Net Asset Value for day (t-1).

Similarly, the daily returns for the benchmark index have been computed. For the benchmark index, the return is calculated as:

$$Return = (Index_t - Index_{t-1}) / Index_{t-1}$$

The weekly yield on 91 days Treasury Bills are already in the return form.

Risk

The risk is calculated on the basis of daily-end NAV. The following measures of risks associated with mutual funds have been for the study:

Standard Deviation- The total risk is measured by the standard deviation of the daily returns which was calculated using the following formula:

$$\sigma = \sqrt{\frac{1}{n-1}\sum_{t=1}^{n}(R_t - \overline{R})^2}$$

where,

σ = *Standard Deviation,* n= *number of daily returns*

R_t = *returns of the mutual fund schemes* $\bar{R}$ = *mean return of the mutual fund.*

The square of the standard deviation is called the variance. *Variance*= $(\sigma)^2$

Coefficient of Variation- expresses the total risk undertaken by the mutual funds schemes under consideration per unit of returned achieved. More specifically, the coefficient of variation was given by:

$$Coefficient\ of\ Variation = \frac{\sigma}{\bar{R}}$$

Beta(β)- Beta estimate the systematic risk, is the fund's volatility as regard market index measuring the extent of co movement of fund with that of the benchmark index.

$$\beta = \frac{Covariance\ between\ Mutual\ Fund\ Return\ and\ Market\ Return}{Variance\ of Market\ Return}$$

Higher the values of beta indicate a high sensitivity of fund returns against market return and the lower the value indicate lower sensitivity.

Treynor Measure

Treynor (1965) conceived an index of portfolio performance called as reward to volatility ratio based on systematic risk. It is denoted by T_P is the excess return over the risk free rate per unit of systematic risk, in other words it risk premium per unit of systematic risk.

$$T_P = \frac{Risk\ Premium}{Systematic\ Risk}$$

$$Fund's\ T_P = \frac{R_p - R_f}{\beta_p} \qquad Benchmark's\ T_P = \frac{R_m - R_f}{\beta_m}^1$$

Market Beta (β) is always 1.

where,

T_P= *denotes the Treynor Ratio,*

R_p= *denotes the average return of the mutual fund scheme,*

R_f= *denotes the average return on risk-free assets,*

β_p = *denotes the Beta of the mutual fund scheme,*

R_m= *denotes the average return of market or benchmark index,*

β_m= *denotes the Beta of the market.*

This Treynor measure shows the relationship between the return on the portfolio, above the risk-free rate, and its systematic risk. Calculation of Treynor ratio requires a reference index to be chosen to estimate the beta of the portfolio. The Treynor ratio is particularly appropriate for appreciating the performance of a well-diversified portfolio, since it only takes the systematic risk of the portfolio into account, i.e. the share of the risk that is not eliminated by diversification.

Sharpe Measure

Sharpe (1966) devised an index of portfolio performance measure, referred to as reward to variability ratio. The Sharpe ratio provides the reward to volatility trade-off. It is the ratio of the fund portfolio's average excess return divided by the standard deviation of the return and is given by:

$$S_P = \frac{Risk\ Premium}{Total\ Risk}$$

$$Fund's\ S_P = \frac{R_p - R_f}{\sigma_p} \qquad Benchmark's\ S_P = \frac{R_m - R_f}{\sigma_m}$$

where,

S_P= *denotes the Sharpe Ratio,*

R_p= *denotes the average return of the mutual fund scheme,*

R_f= *denotes the average return on risk-free assets,*

σ_p= *denotes the standard deviation of the mutual fund scheme,*

R_m= *denotes the average return of market or benchmark index,*

σ_m= *denotes the standard deviation of the market or benchmark index return.*

This ratio measures the return of a portfolio in excess of the risk-free rate, also called the risk premium, compared to the total risk of the portfolio, measured by its standard

deviation. Since this measure is based on the total risk of the portfolio, made up of the market risk and the unsystematic risk taken by the manager, it enables the performance of portfolios that are not very diversified to be evaluated. This measure is also suitable for evaluating the performance of a portfolio that represents an individual's total investment.

Jensen Measure

Jensen (1968) propound Jensen Alpha measures which is intercept from the Sharpe-Linter CAPM regression which measure impact of market portfolio excess returns on portfolio excess return. Jensen's alpha is the arithmetic difference of the portfolio's return from the return of a portfolio on the securities market line with the same beta. Jensen defines his measure of portfolio performance as the difference between the actual return on a portfolio in any particular holding period and the expected returns on that portfolio conditional on the risk free rate, its level of systematic risk and the actual return on the market portfolio. Jensen's alpha measures is given by the-

Differential Return= Portfolio Return- CAPM Return

Or

$$\alpha = R_p - \{R_f + \beta(R_m - R_f)\}$$

where,

α = *Differential return earned by the schemes*

R_p= *denotes the average return of the portfolio (mutual fund scheme),*

R_f= *denotes the average return on risk-free assets,*

β = *denotes the Beta of the mutual fund scheme,*

The above regression equation is the same form as the Security Market Line (SML) equation except that an intercept term. The Jensen measure is based on the Capital Asset Pricing Model (CAPM). The parameters were estimated by using standard regression techniques. Thus, it involve running of regression with excess return earned by the mutual fund schemes (dependent variable) on the benchmark index (independent variable). The excess return of both the mutual fund schemes and the benchmark portfolio is computed with the reference to the return on the risk free return. A positive and significant alpha indicates that mutual fund scheme has generated average return greater than the return on the benchmark index thereby

indicating a superior performance. The value of alpha has been tested at 5 per cent level of significance.

Fama Measures

As discussed earlier risk adjusted performance measures discussed earlier primarily judge the overall performance of a fund. However it is useful to breakdown the performance into the different components of performance. Thus, in addition to using the explicit risk- return trade off measures for performance evaluation of mutual funds, It may also evaluate the portfolio on the basis of decomposition of portfolio performance by using components of investment performance such as proposed by Fama.

Fama (1972) measures breaks down the observed return into four components:

Risk Free Return	R_f
Compensation for Systematic Risk	$\beta(R_m - R_f)$
Compensation for Inadequate Diversification	$(R_m - R_f)\{(\sigma_p/\sigma_m)-\beta)\}$
Net Superior Returns due to Selectivity	$(R_p - R_f)-\{(\sigma_p/\sigma_m)(R_m - R_f)\}$

Fama argues that the difference between return on an active bet and return on a passive bet which is obtained from the security market line may arise due to selectivity skills of the fund manager. This difference is analogous to the alpha of Jensen measure. However Fama goes a step further and decomposes selectivity into diversification return and net diversifiable risk to which active bet is exposed of the fund manager. It may be noted that positive net selectivity and selectivity are not likely to be significantly different from each other. Thus, in sum it is advisable to test either selectivity or net selectivity for performance evaluation in case of well diversified portfolios since both measures would provide the same result. However, Net selectivity is a more appropriate measure in case of diversified portfolio.

$$F_p = \textit{Portfolio Return} - \textit{Risk free return} - \textit{Returns due to all risks}$$

$$= (R_p - R_f)-\{(\sigma_p/\sigma_m)(R_m - R_f)\}$$

A positive value for F_p indicates that the fund earned returns higher than expected returns and lies above Capital Market Line (CML) and a negative value indicates that the fund earned return less than expected returns and lies below CML.

Treynor & Mazuy Market Timing Measure

The Treynor & Mazuy model introduced in 1966 by Jack Treynor and Kay Mazuy which can be used to analyze both the selection and timing abilities of a mutual fund. The performance analysis is divided into two pieces, one analyzing the mutual funds

ability to find undervalued stocks (selectivity) and the other analyzing the asset manager ability to predict the direction the market will be moving in timing. Treynor & Mazuy added a quadratic term to Jensen's single index model to test the market timing skills of asset managers. Besides examining the validity of Jensen's measure, the model decomposes the source of performance implied by the index model. The model is based on the premises that portfolio returns are a non linear function of the market return. The specification of the model is given by

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,(R_m - R_f)^2 + \varepsilon_{pt}$$

where,

R_p= *denotes the average return of the mutual fund scheme,*

R_m= *denotes the average return of market or benchmark index,*

R_f= *denotes the average return on risk-free assets,*

α, β *and* γ *are the parameter of the model.*

ε_{pt} = *denotes to the error term.*

The parameter in the above model can be estimated by using standard regression methodology. Treynor and Mazuy have argued that estimated value of parameter γ in the formula act as a measure of market timing skills of the fund manager. If fund managers could able to select the time correctly, the estimated value of γ would be significantly positive. On the contrary if the estimated value of γ should not be significantly different from zero, the fund managers are not able to select the market timing correctly. The average value of the portfolio would be constant when the fund manager is not engaged in the market timing only concentrates in the stock selection. In this case fund return and market return would be in linear relationship. Even if the fund manager changed the beta and would not be successful in assessing the market timing, still it shows the linear relationship. Treynor and Mazuy argued that in case the fund manager was successfully assess the market direction and changes the portfolio beta, it would find a higher than normal beta. In that situation it implies that the fund is doing better. When the market declines, the fund has a lower than normal beta. In such situations the plots of the fund returns against the market returns would lie above the linear relationship and would give a curvature to the scatter points *(Choudhary V.& Chawla P. S.2014 ,p.78).*

Treynor and Mazuy argued that if the above regression is carried out with $R_p - R_f$, as the dependent variable, the estimated value of the parameter γ will act as a measure of

the market timing of the fund manager. If the fund manager is unable to time the market correctly, than the estimated value of γ should not significantly different from zero. Their argument was that when the fund manager is not attempting to time the market and concentrating only on the stock selection, the average beta of the portfolio over time should remain fairly constant and the plots of the fund's excess returns versus that of the market's excess return over the risk free rate would be a straight line. If the fund manager attempts to time the market and changes the beta of his portfolio but is unsuccessful in properly assessing the direction of the market, the above plot would still show a linear pattern, may be only with an additional scatter. However if fund manager actively attempts to time the market by changing the beta portfolio in response to the dynamic changes in the market and is successful in assessing the direction of the market, we can expect a more than normal beta during up market conditions and less than normal beta during down market condition. The plots of the fund's excess returns against the market's excess returns would then lie above the linear relationship in the down market conditions. This would be on a continuous basis and as such would impart a curvature to the scatter of the points. The quadratic term added to linear model captures this curvature.

Henriksson & Merton Market Timing Measure

Henriksson & Merton (1981) proposed a similar but simple model to test the market timing abilities of the fund manager. Treynor and Mazuy (1966) argued in the model that the fund manager who times the market, is continuously changing the beta of his portfolio depending on the magnitude of the $(R_m - R_f)$ term. However, Heniksson and Merton in their model took a more qualitative approach to market timing. They assumed that the market timers are required to forecast whether $R_m \geq R_f$ (up markets) or $R_m \leq R_f$ (down markets) and select a fund beta accordingly (a large value if the market is expected to do well, i.e. $R_m \geq R_f$ and a small value otherwise, i.e. when $R_m \leq R_f$.

In this model, the successful market timers were assumed to be less sophisticated and their task was, to some extent, reduced in comparison to say, the T & M model. Therefore a fund manager who is successful market timer, as per this model was required to select a high up market beta and a low down market beta. They represented such a relationship mathematically by using a regression equation involving a dummy variable as follows:

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,[D(R_m - R_f)] + \varepsilon_{pt}$$

where, D is a dummy variable that equals to 0 in up markets, i.e. $R_m \geq R_f$ and -1 down market, i.e. when $R_m \leq R_f$. The other symbols are as defined in equation as:

R_p= denotes the average return of the mutual fund scheme,

R_m= denotes the average return of market or benchmark index,

R_f= denotes the average return on risk-free assets,

α, β and γ are the parameter of the model.

ε_{pt} = denotes to the error term.

By this argument, the beta of the portfolio is β in a bull or an up market condition and (β – γ) in a bear or a down market condition. Thus the parameter γ indicates the difference between the two betas and a positive and significant value of γ would indicate market timing abilities of the fund manager. It may be noted that in both these models, the intercept term α represents the stock selection ability of the fund managers *(Deb S. G. et al. 2007, p. 42).*

Multiple Regression

Regression analysis is a statistical tool which measures the impact of independent variables on dependent variable. Regression technique has been great importance to the field in research. Usually investigator seeks to ascertain the causal effect one variable upon another. To analyze such issues, the investigator assembles data on the underlying variables of interest and employs the regression technique to estimate the quantitative effect of the causal variables upon the variables that they influence. This typically assesses the statistical significance of the estimated relationship i.e. the degree of the confidence that the true relationship is close to the estimated relationship. Increase in the number of independent variable in the model increase the closeness to real trend. Multiple Regression looks at each individual independent variable and tests whether it contributes significantly to the way the regression describes the data *(Priyadarshini E. & Babu C. 2012, p.347).* In multiple regression, a linear combination of two or more predictor variable is used to explain the variation in a response. The general multiple regression equation is

$$Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots b_n x_n$$

where,

Y = Estimated value corresponding to dependent variable,

A = Regression coefficient or Intercept of the model,

$b_1, b_2, b_3 \ldots\ldots\ldots b_n$ = *Regression coefficient or Slope of the model,*

$X_1, X_2, X_3 \ldots\ldots\ldots X_n$ = *value of n independent variable.*

The model consists of regression coefficients. Slope explains how much dependent variable change with change in dependent variable by one unit. Intercept determine the value of dependent variable when independent variables are zero.

R-square or the coefficient of determination is a measure of the regression's explanatory level which is how much of variability in y that can be explained by the regression equation. R-square is the ratio between the variation in the dependent variable explained by the regression equation and the total variation in the dependent variable. The measure falls between zero and one and is usually expressed in percentage. If R^2 equals to one the equation is explained 100 per cent variability in the dependent variable y. In the simple regression, R-Square is equal to square of correlation between x and y *(Karlsson T. 2005, p. 15).*

Independent sample T-Test

This section discusses the most typical form of t-test that compares the means of two independent random samples. They are independent in the sense that they are drawn from different populations and each element of one sample is not paired (linked to) with its corresponding element of the other sample.

T-tests assume that samples are randomly drawn from normally distributed populations with unknown parameters. In addition to these random sampling and normality assumptions, it is necessary to check the equal variance assumption when examining the mean difference of two independent samples. The population variances of the two groups, σ^2_1 and σ^2_2 need to be equal in order to use the pooled variance. Otherwise, the t-test is not reliable due to the incorrect variance and degrees of freedom used *(Park H. M. 2009, p.18).*

$$t = \frac{(\bar{x}_1 - \bar{x}_2)}{S} \sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

where

$$S = \sqrt{\frac{\sum(X_1 - \bar{X}_1)^2 + \sum(X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}}$$

Paired sample T-Test

T-tests compare the means of two samples. Two variables may or may not be independent. When each element of a sample is matched to its corresponding element

of the other sample, two samples are paired. This paired t-test examines the mean of individual differences of paired measurements and thus is appropriate for pre-post situations. The paired t-test is based on the pair wise differences in values of matched observations of two samples. The difference of matched pairs is treated as a variable; the logic of the paired t-test and one sample t-test is identical.

$$t = \frac{\bar{d} - \mu_d}{\frac{s_d}{\sqrt{n}}}$$

where n is the number of pairs of difference, $\bar{d}$ the mean of sample difference, μ_d the mean population difference and s_d the standard deviation of the sample difference.

Here,

$$\bar{d} = \frac{\sum d}{n} \qquad s_d = \frac{\sqrt{\sum (d - \bar{d})^2}}{n-1}$$

Covariance

In statistics, we often come across with an important concept covariance. It is a measure of comparison of data which is quite frequently used in probability theory and statistics. Covariance is a statistical representation of the degree to which two variables vary together. Covariance is a number that reflects the degree to which two variable vary together. If the greater values of one variable correspond with the greater values of the other variable, or for the smaller values, then the variables shows similar behavior, the covariance is a positive. If the greater values of one variable correspond to the smaller values of the other, the variables tend to show opposite behavior, the covariance is negative. If one variable is greater and paired equally often with both greater and lesser values on the other, the covariance will be near to zero. The co variance is calculated as:

$$\text{Covariance} = \frac{\sum dxdy}{N}$$

Correlation (r)

Correlation measures the nature and the extent of relationship between the variables for a particular period. It shows the degree of relationship between two variables. The correlation value is determined by the r. Correlation indicates the statistical dependence between two random variables. It is the measure of the relationship between two sets of data. The correlation between two variables is a number which is

known as a correlation coefficient. Correlation Coefficient is a statistical concept, which helps in establishing a relation between the predicted and actual values obtained in a statistical experiment. The calculated value of the correlation coefficient explains the exactness between the predicted and actual values. Its value always lies between -1 to +1. If the value of the correlation coefficient is positive, it indicates the similar and identical relation between the two values. Whereas negative value indicates the dissimilarity between the two values. The formula of computing the value of correlation (denoted by r) is:

Direct Method (where deviation is taken from mean)

$$r = \frac{(\sum dxdy)}{\sqrt{\sum d^2x \times \sum d^2y}}$$

Or

$$\frac{Covariance\ (x,y)}{\sqrt{Varianceofx} \times \sqrt{\sqrt{Varianceofy}}}$$

$$\frac{CoVariance\ (x,y)}{\sigma_x . \sigma_y}$$

where,

$$\sigma_x = \sqrt{\frac{\sum(x-\bar{x})^2}{n}} \qquad \sigma_y = \sqrt{\frac{\sum(y-\bar{y})^2}{n}}$$

Indirect Method (where deviation is taken from mean or not)

$$\frac{(\sum dxdy) \times n - (\sum dx \times \sum dy)}{\sqrt{[\sum d^2x \times n - (\sum dx)^2][\sum d^2y \times n - (\sum dy)^2]}}$$

Herfindahl-Hirschman Index

The Herfindahl-Hirschman index, better known as the Herfindahl index, is a statistical measure of concentration *(Rhoades S. A., 1993, p. 188)*. It is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them. The index was developed independently by the economist Hirschman A.O. (1945) and Hefindahl O. C. (1950). Hirschman presented in the index in his book 'National power and the Structure of the foreign trade' and Herfindahl's index was presented in his unpublished doctoral dissertation "Concentration in the U. S. steel industry." HHI is an economic concept widely applied in competition law, antitrust and also technology management. Increases in the Herfindahl Hirschman index

generally indicate a decrease in competition and an increase of market power, whereas decreases indicate the opposite. The major benefit of the Herfindahl Hirschman index in relationship to such measures as the concentration ratio is that it gives more weight to larger firms. The HHI accounts for the number of firms in a market, as well as concentration, by incorporating the relative size (that is, market share) of all firms in a market. It is calculated by squaring the market shares of all firms in a market and then summing the squares, as follows:

$$HHI = \sum_{i=1}^{N} s_i^2$$

or

$$HHI = s_1^2 + s_2^2 + s_3^2 + \ldots + s_n^2$$

where,

H =Herfindahl-Hirschman index,

S_i = Market share of i^{th} firm in the market,

N = Number of firms.

The HHI for different subclasses of concentration levels can be classified as:

CONCENTRATION LEVEL	HHI INDEX
Perfect Competition	0
Highly Competitive Market	0 < HHI < 0.01.
Unconcentrated Market	0,01 < HHI < 0.1
Concentrated Market	0.1 < HHI < 0.18
Highly Concentrated Market	0.18 < HHI < 1
Monopoly Market	1

Source: The U.S. Department of Justice and the Federal Trade Commission. 2010, p. 19

Concentration within an industry refers to the degree to which a small number of firms provide a major portion of the industry's total production. If concentration is low, then the industry is considered to be competitive. If the concentration is high, then the industry will be viewed as oligopolistic or monopolistic. The Herfindahl-Hirschman Index (HHI) calculates concentration ratios by squaring the market share of the fifty largest firms in an industry.

1.8 SIGNIFICANCE OF THE STUDY

The asset management companies have been providing a platform of transforming the idle money into investment. They have succeeded in mobilizing huge amounts of money of small investors. The study assumes a lot of significance as it examines whether the schemes managed by asset management companies have kept their commitments made at the time of launch of various schemes. It also examines whether asset management companies have invested the pooled resources of funds according to investment objective and investors are getting the reward as per risk attaches with the investment. The study also analyzes the different factors that influence the growth and market structure of asset management companies. Overall the study may provide a guideline for the investors and a tool for evaluating performance of managed schemes through risk and return factors.

1.9 CHAPTER PLAN

The study is divided into six chapters. **Chapter 1** introduces the concept of investment, collective investment vehicles and global asset management industry. This chapter also deals with research gap, objective, hypotheses, scope, research methodology significance, limitation and expected contribution of the research.

Chapter 2 presents an extensively review of the existing literature on the subject which provide an idea about the overall view of industry. This chapter includes all relevant previous studies based on benchmark studies, investment performance, market timing performance and other important literature related to asset management companies.

Chapter 3 deals with the overview of Indian capital market. Detailed background, regulatory framework, function, recent initiatives and various instruments of capital market are discussed in this chapter. A detailed discussion on growth and development of Indian capital market is a part of this chapter.

Chapter 4 is devoted to theoretical framework of asset management companies in India. It deals with the function, legal aspects, duties and obligations of the asset management companies. A detailed background of mutual fund schemes manage by asset management companies and their current scenario is being discussed.

Chapter 5 concerns with analysis and interpretation. It evaluates the investment performance of sample mutual fund schemes by using different portfolio evaluation

measures. It measures the capabilities of asset management companies to time the market by using the market timing models. It analyzes the impact of important determinants on the growth of asset management industry. This chapter also attempts to compare the performance of private and public asset management companies, evaluate the market competitiveness and effect of financial crisis on the industry. **Chapter 6** is devoted to the findings conclusion and suggestions of the study.

1.10 CONTRIBUTION OF THE STUDY

Every study is having its own limitations and utilities. The measurement of the fund performance has become an interested area in both academic and practitioner community because of growing importance of asset management industry. This study provides main benefit to those investors who are interested in the investment practices followed by asset management companies. A periodical evaluation of the fund performance investors to know whether the fund managers add value to the portfolio managed by them or not. The investors are in a position to understand the risk and return analysis attached with various schemes. The findings of the study indicate that Indian asset management companies provide risk adjusted return in long term period through their diversification strategies. The asset management companies are getting benefit of their selectivity skills rather than market timing abilities. The research explores the impact of various determinants on the growth of the asset management industry and traces out the competition exist in the market. The detailed investigation and analysis helps stakeholders to draw their own remark on the performance of asset management companies and this study may also contribute to the literature for future researches in this field.

The present chapter dealt with introduction and global outlook of asset management companies. The research design was also brief in the same chapter which included objectives, hypotheses, research methodology. This chapter also includes statement of problem, research gap, scope and significance of the study. The successive chapter will review the earlier studies in the context of asset management companies.

REFERENCES

Bollen N. P. B. & Busse J. A. (2001). On the timing ability of mutual fund managers. *The Journal of Finance, 56*(3), 1075-1094 retrieved from http://onlinelibrary. wiley.com/doi/10.1111/0022-1082.00356/pdf

Choudhary V. & Chawla P. S. (2014). Selectivity and market Timing ability of the fund managers in India: An analysis of selected equity mutual funds. *IOSR Journal of Economics and Finance, 1*, 75-83, retrieved from http://www.iosrjournals.org/iosr-jef/papers/icsc/volume-1/9.pdf.

Deb S. G. et al. (2007). Market timing and stock selection ability of mutual funds in India: An empirical investigation. *Vikalpa, 32*(2), 39-51.

Fama E. F. (1972). Components of Investment Performance. *Journal of Finance,, 27*, 551- 567.

Henriksson R. D. & Merton R. C. (1981).On Market Timing and Investment performance. II. Statistical Procedures for Evaluating Forecasting Skills. *Journal of Business, 54*(4), 513-533.

Herfindahl O. C. (1950). Concentration in the US Steel Industry (Doctoral Thesis), *Columbia University* New York.

Hirschman A. O. (1945). National Power and the Structure of Foreign Trade, University of California Press, Berkeley.

ICI Factsheet. (2014). A Review of Trends and Activities in the U.S. Investment Company Industry (54th Edition). Investment Company Institute. Retrieved from http://www.ici.org/pdf/2014_factbook.pdf

IIFA-Industry Statistic. (2014). Worldwide Mutual Fund Asset and Flows- Fourth Quarter 2013.International Investment Funds Association. Retrieved from http://www.iifa.ca/documents/1401461698_International%20Investment%20Funds%20Statistics%20Q4%202013.pdf

Jensen M. C. (1968). The performance of mutual funds in the period 1945-1964.*Journal of Finance, 23*(2), 389–416.

Kamble R. M. (2013). Mutual funds and SEBI regulations. *International Journal of Computational Engineering Research, 3*(5), 23-27, retrieved from http://www.ijceronline.com/papers/Vol3_issue5/Part.1/E0351023027.pdf

Karlsson T. (2005). Mutual fund performance: Explaining the performance of Swedish domestic equity mutual funds by using different fund charactistics,

(Doctoral Thesis). *School of Economics and Commercial Law. Goteborg University.*

Levisauskait K. (2010). *Investment Analysis and Portfolio Management.* Vytautas Magnus University, Lithuania, retrieved from http://www.bcci.bg/projects/latvia/pdf/8_IAPM_final.pdf

National Stock Exchange. (2013). *Indian Security Market- A Review- 2013*.41-66.Retrieved from http://www.nse-india.com/research/dynaContent/ismr.htm.

Park H. M. (2009). Comparing Group Means: T-tests and One way ANOVA using Stata. SAS, R and SPSS. (Unpublished Doctoral Thesis), *Indiana University,* Indiana, Retrieved from http://rt.uits.iu.edu/visualization/analytics/docs/hlm-docs/ttest.pdf

Priyadarshini E. & Babu C. (2012). A comparative analysis for forecasting the NAV's of Indian mutual fund using Multiple Regression Analysis and artificial Neural Networks. *International Journal of Trade, Economics and Finance, 3*(5), 347-350.

Rhoades S. A. (1993). The Herfindahl- Hirschman Index, 188-189, Retrieved from http://fraser.stlouisfed.org/docs/publications/FRB/pages/1990-1994/33101_1990-1994.pdf

Rustagi R. P. (2008). Investment Analysis and Portfolio Management. *Sultan Chand & Sons. ISBN 978-81-8054-632-7.*

Sharpe W.F. (1966). Mutual fund performance. *Journal of Business, 39,* 119-138.

Treynor J. & Mazuy K. (1966). Can mutual funds outguess the market? *Harvard Business Review, 44,* 131–136.

Treynor J. L. (1965). How to rate management of investment funds? *Havard Business Review. 43*(1), 63-75.

Tripathy N. P. (2005). An empirical evaluation of market timing abilities of Indian fund managers on equity linked savings scheme. *Delhi Business Review, 6*(2), 19-27.

U.S. Department of Justice and the Federal Trade Commission. (2010). *Horizontal Merger Guidelines.* 1-34, retrieved from http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf

CHAPTER-2

REVIEW OF LITERATURE

2.1 INTRODUCTION

The performance evaluation of managed portfolios has been a widely debated in the area of finance. The performance of mutual funds manage by Asset Management Companies has become an issue of concern to the investment public, the policy makers and the institutional investors. Therefore several studies have been taken up to evaluate the performance of mutual funds, the problems of asset management companies, portfolio diversification, emerging trends and prospects of asset management companies, safety, liquidity, SEBI regulations, tax factors and perceptions of investors etc. In this chapter an attempt has been made to review existing studies which is classified in the following aspects:

- Benchmark Studies
- Studies related with Investment Performance
- Studies related with Market timing abilities
- Other Studies

2.2 BENCHMARK STUDIES

This section provides a selective review for measuring portfolio performance of professionally managed investment portfolios. It involves classical measures of portfolio performance developed between 1960-1990 which resulted in development of new concepts and approaches in the literature. These studies are the benchmark which provides direction to many researches of academicians and practitioners.

Treynor J. L. (1965) presented a new way of viewing performance results. He attempted to rate the performance of mutual funds graphically on a characteristics line. The steeper the line, the more systematic risk or volatility a fund possesses. By incorporating various concepts, he developed a single line index called Treynor index. The systematic risk is risk which is common to all securities of the same class in the market. His index measures the risk premium of the portfolio where risk premium equals the difference between the return of the portfolio and the riskless rate. The risk premium is related to the amount of systematic risk assumed in the portfolio, the higher the value of Treynor index, the better the performance of fund. To measure the performance, Treynor propounded the following model:

$$T_P = \frac{Risk\ Premium}{Systematic\ Risk}$$

Sharpe W.F. (1966) explained a modern portfolio theory about expected return. According to him the expected return on an efficient portfolio and its associated risk (unsystematic risk) are linearly related. By incorporating various concepts he developed a Sharpe index. In this paper he attempted to rate the performance on the basis of the optimal portfolio with the risky portfolio and a risk free asset is the one with the greatest reward to variability. The unsystematic risk is related to particular security due to inefficient management. Moreover he has examined 34 open-end mutual funds (period 1954-1963) and found considerable variability in the Sharpe ratio, ranging from 0.78 to 0.43. He provided two potential explanations for the result that the cross-sectional variation is either random or due to high fund expenses or the difference is due to management skills. The Sharpe Index is measured as:

$$S_P = \frac{Risk\ Premium}{Total\ risk}$$

Treynor J. & Mazuy K. (1966) discussed the fund manager and investor relationship wherein the investors frequently expect that the managers are able to predict the market volatility and market timing ability of fund manager. To address the issue, the authors devise a test of mutual fund historical success in predicting major moves in the market by adding a quadratic term in the CAPM. They explain the way that a fund can translate ability to outguess the market into higher return which results in an upwardly concave characteristic line there is no curvature in characteristic lines for any of the mutual funds. They conclude that none of the managers have outguessed the market and the managers should not be held responsible for failing to foresee changes in market direction. Following equation is given by Treynor & Mazuy to measure the market timing abilities of fund manager:

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,(R_m - R_f)^2 + \varepsilon_{pt}$$

Jensen M. C. (1968) proposed an absolute measure of portfolio performance that may able to examine the efficiency of the portfolio managers and provides adequate control over the risk component. His model is a practical application of the theoretical results of the CAPM. After the establishment of Jensen measure in the perspective of stock selection and market timing, a large number of researchers have empirically examined the above issues. He measured the differential return which is an indication of superior return in following manner:

Differential Return= Portfolio Return- CAPM Return

Fama E. F. (1972) suggested fund performance in terms of excess returns over expected returns based on premium for total risk. In other words, the excess returns are computed based on capital market line (CML). He suggested that overall portfolio performance has two components. First, performance due to stock selection ability (realized return minus expected portfolio return) of the fund manager and second performance due to expected portfolio risk -return assumed by the fund manager. He further elaborated two fine components, i.e., net asset selectivity and diversification. Higher portfolio return may be consequence of higher portfolio risk resulting from low diversification of equity mutual fund.

Henriksson R. D. & Merton R. C. (1981) derived a market timing test in accordance with CAPM framework. However, there is a major difference in contrast to Jensen's formulation of the model. Their parametric test permits to indentify the contribution from micro as well as macro forecasting abilities to measure the market timing ability of fund manager. They used portfolio return and the market return to measure the market timing ability. Heniksson and Merton in their model took a more qualitative approach to market timing by introducing the dummy term. They assumed that the market timers are required to forecast whether Rm $\geq$ Rf, (up markets) or Rm $\leq$ Rf (down markets) and select a fund beta accordingly. The equation propounded for mor measure the market timing ability is:

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,[D(R_m - R_f)] + \varepsilon_{pt}$$

2.3 STUDIES RELATED WITH INVESTMENT PERFORMANCE

The innovative contribution of William Sharpe, Jack Treynor, Jenssen, Fama, K. Mazuy, Henriksson and Merton is completely revolutionized in the field of investment performance evaluation. Subsequent studies developed the subject with added refinement, up gradation and extension of new dimension in earlier contributions. Due to computerization and latest information technology, it has undergone improvements and innovations in methodology which substantially reduced quantum of data input required for performance appraisal of managed portfolios. In this section, studies related with investment performance measures are classified in international and Indian perspective.

INTERNATIONAL PERSPECTIVE

Rahman A.B.M. Munibur & Barua S. (2012) in their paper focused on evaluating the performance of more than 15 growth oriented mutual funds of Dhaka Stock Exchange (DSE) on the basis of monthly returns compared to benchmark returns. The study period is selected more than 30 months and 12 months or less for funds which those are new in market. It is found that most of the mutual funds have performed better according to Jensen and Treynor measures but not up to the benchmark on the basis of Sharpe ratio. However very few mutual funds are well diversified and have reduced its unique risk. The growth oriented funds have not performed better in terms of total risk and the funds are not offering advantage of diversification and professionalism to the investors.

Brown Keith C. et al. (2011) developed a holding based statistics to measure the volatility of a fund's style characteristics and demonstrate that on average funds with lower levels of style volatility significantly outperform more style volatile funds on risk adjusted basis. They also show that style volatility has a distinct impact on future fund performance compared to fund expenses or past risk adjusted returns and the document that the level unintentional style volatility was the primary determinant of the overall effect. The period covered by the investigation was January 1978 to December 2009. They tested three specific hypotheses related to this issue,

- First a negative relationship exists between portfolio style volatility and future risk adjusted performance.
- Second relation between style volatility and future performance is separate and distinct from the roles played by the past performance and fund expenses.
- And third intentional and unintentional components of style volatility will have different impacts on future performance.

Keith concluded that deciding a less volatile investment style was an important aspect of the portfolio management process. The finding suggested that style volatility measure proved useful in predicting which managers are likely to generate future superior investment returns in their style specific peer groups as well as in forming trading strategies capable of generating measurable levels of outperformance.

Soongswang A. & Sanohdontree Y. (2011a) examined performance of 138 open ended equity mutual funds managed by the seventeen asset management companies in Thailand during the period 2002-2007. Performance of the mutual funds was analyzed

by using Treynor ratio, Sharpe Ratio, Jenson's alpha and Data envelopment analysis (DEA) technique. The result suggested that performances of the funds measured by the first three methods, which are based on risk and return, significantly outperform the market for all time periods of investment. DEA technique resulted in varied outcomes; out-performing and under-performing, depending on time periods of investment. Finally this paper concluded that in Thailand, open-ended equity mutual funds can be a good choice for individual investors.

Soongswang A. & Sanohdontree Y. (2011b) focused on open- ended equity mutual funds in Thailand. The performance of funds was examined whether the returns significantly and persistently out-performed the market. They used various techniques such as the traditional fund performance evaluation measures, Data envelopment Analysis (DEA) technique, Pearson's correlation coefficients and cover six investment horizons. The result suggested that open ended equity mutual fund analyzed in this study significantly out-performed the market and the fund's positive performance sustain for 3 month time period of investment at least. The top five funds managed by the Aberdeen, Bangkok Bank and Siam Commercial Bank Asset Management Company out-perform the bottom five funds between 0.912 and 1.3187 for six time periods of investment from 1-month to 5-year. Finally it is concluded that for individual investors, the result provided by this study can be guidelines for selecting mutual funds for investment.

Habib A. (2010) estimated the portfolio performance of ICB (Investment Corporation of Bangladesh) based on traditional techniques i.e. Sharpe ratio, Treynor ratio, Jensen ratio and Fama measure. He tried to associate NAV of ICB with the stock market performance of ICB to understand the phenomenon, how the shareholders were incorporating the portfolio performance in stock market terminology. The time period starting from July 2004 to June 2011 was taken into consideration. It was revealed that performance of the ICB portfolio was satisfactory but not extraordinary. The portfolio manager had failed to beat the market on a consistent manner in the long run. Most of the schemes underperform the market because of structural rigidity of the organization.

Lai M. M. & Lau Siok H. (2010) examined the performance of 311 mutual funds from January 1990 to December 2005 in Malaysia by using composite performance measures, the single market model, the Fama and French three factor model and the Carhart four factor models across investment horizons. They found evidence that

mutual fund performances yield superior return with relatively lower systematic risk. A three years investment appears to be the preferred period investment horizon with the highest annualized returns of 9.23 per cent. The results indicated that beta, size, book to market value and momentum factors are significant factors in explaining equity fund returns with the Carhart four factor models being the relatively better model among the three. The result further indicate that the average equity funds in Malaysia hold smaller market capitalization stocks and value oriented stocks as well as buying past winning and selling past losing stocks.

Prince V. & Bacon L. (2010) in their research paper analyzed the small cap growth stock sector of mutual fund industry against risk-free and market returns over the ten years 1997-2006. In this paper result were tested against a toolkit of performance of benchmarks to see if expected performance closely corresponds to actual results. The results indicated that some excess returns have been generated however beyond a handful of the funds and it is impossible to rely upon a single benchmark as a reliable indicator of even past performance. The evidence tends to support market efficiency since for the most part, the actively managed funds examined in this study produced returns that were largely expected. The purpose of this paper was to test market theory by examining the performance of mutual funds.

Shojai S. et al. (2010) emphasized in his research paper that while the theoretical aspect of the modern portfolio theory are valuable they offer little insight into how asset management industry actually operated, how its executives compensated, how their performance were measured. He suggested that since portfolio cannot be compared in any meaningful way, selecting portfolio that simply perform better than their peers, irrespective of their so called risk. The performance of many successful portfolio managers have been wrongly discounted using these models and perhaps resulted in their difficulties in attracting the kind of asset that they deserve, possibly resulting in their decision to leave traditional money management and establishing successful hedge funds.

Kaushik A. & Barnhart S. W. (2009) investigated the performance of mutual funds that hold a small number of stocks in the portfolio. They applied the four factor model that was estimated over the entire 2001-2006 period, consisting of 72 months data. The result indicates that the average small holdings fund does not outperform the market. On average small holdings funds underperform the market on a risk and investment style adjusted basis. They also found that there is a sharp contrast between

the performance of winner and loser portfolios. They also used the cross section regression technique that indicate winner portfolio's abnormal performance was positively and significantly related to fund turnover and the per cent of the fund's assets invested in their top 10 most heavily weighted holdings.

Chinchane N.B. (2008) in her project report analyzed the performance of mutual fund schemes by measuring the parameters i.e. alpha, beta and standard deviation. Equity, Balanced, Debt and Liquid scheme were selected for the study to evaluate performance of selected mutual funds in terms of risk and return. The study concluded that the risk and return are the important parameter and the asset manager must have the sufficient knowledge of this parameter before investing the funds in the market.

Jagric T. et al. (2007) studied the mutual fund industry and applied various tests to evaluate the performance capacity of mutual funds. They calculated the performance measures of funds and rank them according to the results. They analyzed only those funds which were older than three years consist of weekly returns calculated as the difference in logarithm of price in the period January 1997 to December 2003 and found the ranking obtained by applying both the Sharpe and Treynor rules to be almost the same, implying that funds are well diversified. The ranking revealed that all analyzed funds outperformed the market on a risk – adjusted basis.

Redman A. & Gullett N. S. (2007) examined the factors that influence risk adjusted returns for bond mutual funds. They divided the data set into taxable bond funds and municipal funds and the factors were grouped into portfolio characteristics, management controlled factors and bond market variables. The data utilized in the study were from Morningstar Principia database for March 997 to March 2000 and January 2001 to December 2003 and include monthly mutual fund returns. In this research paper, it was hypothesized that bond fund characteristics, manager controlled variables and the bond market, as proxy by Benchmark index, determine the risk adjusted returns of bond mutual funds. They conclude that certain fund and manager controlled factors can contribute to risk adjusted to varying degrees and in different ways over the two periods examined. They also found that the most influential fund variable affecting risk adjusted returns was the expense ratio and diversification among equity classes of bonds was significant in determining risk adjusted returns for municipal bond funds, although the direction of the impact changed from positive to negative.

Renneboog L.D.R. et al. (2007) discussed the price of ethics by studying the risk return relation in Socially Responsible Investment (SRI) funds. Consistent with investors paying a price of ethics, SRI funds in many European and Asia Pacific countries strongly underperformed domestic benchmarks. This paper concluded that the screening activities of SRI funds have a significant impact on funds' risk adjusted and loading on risk factors: Corporate governance and social screens generate better risk- adjusted returns whereas other screens (e.g. environmental ones) yield significant returns.

Hooper K. et al. (2006) studied persistence of exist return to analyze growth of mutual fund in New Zealand. This measured the return based on annual performance. To eliminate the subjectivity from the method of direct examination used the Spearmen Rank Non Parametric method (SRM) to elicit the existence of persistence. The study found that most of the funds sampled during the period 1996-2003 were unable to better the benchmark of the world index.

Karatepe Y. & Gokgoz F. (2006) tried to study the investment style and reveal periodic return distributions of Turkish Equity mutual funds for 2001-02. Style analysis have shown that the funds are heavily composed of passive investments with risk free assets and that the portfolio structure and potential fund return have been significantly affected while attempting to diminish the portfolio risks. This paper also determined that the investments of these funds were insufficient on real sector. It was also found out that the style analysis method provides significant result in estimating the fund's exposures so that investment strategies of the Turkish fund managers can be estimated in terms of asset.

Avramov D. & Wermers R. (2005) analyzed the performance of portfolio strategies that invest in no load open ended U.S. domestic funds, incorporating predictability in manager skills, fund risk loading and benchmark returns. They derived a framework in which to assess the economic significance of predictability of mutual funds returns as well as overall value of active management from a perspective of three types of Bayesian optimizing investors who differ with respect to their belief about the potential of mutual fund managers to possess stock- picking skills and benchmark timing abilities. Their finding indicated that industries were important in locating outperforming mutual funds and that active management ad much more value than documented by prior studies.

Noulas G. A. et al. (2005) evaluated the performance of Greek equity funds during the period 1997-2000. The evaluation was based on the analysis of risk and return. The risk was measured through the coefficient of variation and systematic risk. This study was based on four year period. The first three years were characterized by positive returns of the stock market and the fourth year was the year of rapid fall of the stock market with respect to risk and return. This paper evaluated the performance of equity funds during the period 1997-2000. At the end of 1997 the market share of this category was only 3.24 per cent while by the end of 1999 the market share reached 41.6 per cent. The result showed that there were big differences among the equity mutual funds with respect to risk and return and the result indicated that there was a positive relation between risk and return for the whole period while the betas for all funds were smaller than one.

Sorros N. J. (2003) tried to evaluate the performance of sixteen equity mutual funds operating in the Greek financial market over the period of 01-01-95 to 31-12-99. He ranked the sample mutual funds on the basis of their return, total risk, coefficient of variation, systematic risk and used the technique of Treynor and Sharpe. The result showed that four mutual funds achieved lower return than the General index of the Athens Stock Exchange (ASE). All sixteen mutual funds showed lower total risk and risk-return coefficient than the General index of ASE. In all mutual funds the beta coefficient was statistically significant at 5 per cent level of significance. The alpha coefficient was also statistically significant at 5 per cent level of significance in eight mutual funds. The moments of General Index of the ASE explain more than 80 per cent of the variation in return in all sixteen mutual funds. Eight mutual funds were ranked in the same order on either Treynor's or Sharpe's technique.

Wermers R. (2000) measured the performance of mutual fund industry from 1975 to 1994. He found that funds that outperform the market by 1.3 per cent per year, but their net returns underperform by 1 per cent. Of the 2.3 per cent difference between these results, 0.7 per cent is due to the underperformance of nonstick holdings whereas 1.6 per cent is due to expenses and transaction costs. The limitation of the study was that he ignored the higher tax burden of actively managed funds.

Detemple B. J. & Gottardi. (1996) studied the conditions for aggregation, portfolio separation and effective completeness of competitive allocation in general equilibrium models with incomplete markets where agents in general preference and endowment distributions. They showed that properties were distinct and demand may aggregate

yet may fail to exhibit fund separation and conversely. The implication of these properties for the structure of equilibrium was discussed and generalization of the CAPM, the consumption CAPM and the CAPM with non-marketed wealth emerge from the analysis.

Ippolito A. R. (1989) tested in his study those conditions characterizing the mutual fund industry that satisfy conditions for the efficient market. He evaluated the performance of the mutual fund industry over a 20 year period by taking 143 mutual funds as a sample which accounted for 85 per cent of all mutual funds assets in1965. The study found evidence that is consistent with optimal trading in efficient markets.

INDIAN PERSPECTIVE

Garg M. (2014) conducted research to evaluate the performance of mutual funds for the period from 2002-03 to 2012-13. The research used primary and secondary data to evaluate the financial performance and the performance of the mutual funds from investor's point of view. The sampling frame consists of 1000 investors with a response rate of 66 per cent and sample of 50 schemes were selected to analyze the financial performance. This study also evaluated the impact of regulatory norms on the performance of mutual funds. Author concluded that most of the sample schemes outperform the market and average performance was found in Sharpe Treynor and Jensen Measure.

Annapoorna M. S. & Gupta P. K. (2013) aimed to evaluate the performance of mutual fund schemes ranked one by CRISIL and compared these return with SBI domestic term deposit rates. The simple statistical techniques like average and rate of returns were used in to rank the schemes and performance for the period of 2008-2013 were considered. The findings of the study revealed that equity mutual funds had shown a superior return for the period of initial 5 years. In most of the cases the mutual fund schemes had failed to provide the return as compare to risk free assets (SBI domestic term deposit).

Vasantha S. V. et al. (2013) in their research paper evaluated the performance of selected open ended equity diversified mutual fund in the equity market. For this purpose the study consist of sample of 5 schemes and data was taken from January 2008 to December 2012, a period of 60 months. The analysis was based on portfolio performance technique such as Sharpe ratio, Treynor ratio and Jensen ratio. The study concluded that majority of the funds showed the negative return and a significant relationship was found between market return and scheme return. HDFC top 200

schemes had yield the highest average return among the sample in the study period. The study is confine to only 5 sample mutual fund schemes, from these sample inferences cannot be applicable to all the industry.

Bahl S. & Rani M. (2012) investigated the performance of 29 open ended, growth oriented equity schemes for the period of April 2005 to March 2011. They evaluated the performance on the basis of Sharpe, Treynor and Jensen's measure and the result revealed that 48 per cent of the schemes had outperformed the benchmark return. The Sharpe ratio for all the schemes was positive and 19 out of 29 schemes had outperformed the benchmark on the basis of Treynor ratio. The result also revealed that some schemes were facing the diversification problem, had underperformed the market. On the basis of Jensen measure 65 per cent of the schemes were showed positive alpha which indicate superior performance of the schemes.

Dhanda S. K. et al. (2012) made an attempt to study the performance evaluation of selected open ended schemes in terms of risk and return relationship by using rate of return, Beta, Standard Deviation, Sharp Ratio and Treynor Ratio. BSE-30 has been used as a benchmark to study the performance of mutual fund in India and the study period has been taken from April 2009 to March 2011. This study considered ten growth schemes of open ended mutual funds. The finding of the study revealed that only three scheme have performed better than benchmark.

Nimalathasan B. & Gandhi R. K. (2012) focused on the financial performance analysis of mutual fund schemes of selected banks. The objective of the research work is to evaluate the financial performance of selected mutual fund schemes through the statistical parameters (Standard Deviation, Beta and Alpha) and the ratio analysis (Sharpe ratio, Treynor ratio, Jensen ratio, Information ratio). The study created awareness among the investor community thereby choosing the mutual fund scheme, the investor should fact sheet thoroughly.

Prajapati K. P. & Patel M. K. (2012) evaluated the performance of mutual funds through relative performance index, risk return analysis, Treynor's ratio, Sharpe's ratio, Jensen and Fama's measure. The study period is January 2007 to December 2011 and yield maturity of 364 days treasury bills is taken as risk free rate of return. The result indicates that all mutual funds are less volatile than the index as the beta value is less than one. Sharpe ratio of HDFC mutual fund is higher than others and in terms of Treynor ratio HDFC and Reliance mutual fund offers better return in

comparison to ICICI prudential, UTI and Birla sun life mutual funds for the same level of risk exposure.

Gohar et al. (2011) compared the performance of different types of mutual funds in Pakistan and concluded that equity funds outperform income funds. Sample has been selected on the ranking of companies as per Pakistan Credit Rating Agency (PACRA) and the data will be collected for five years from 2005 to 2009 on monthly basis. The finding showed that within equity funds, broker backed category shows better performance than institutional funds and institutional funds are outperforming broker backed funds among income funds.

Kumar L. N. & Devi R. V. (2011) evaluated the performance of selected mutual funds using average rate of return, standard deviation, Risk, Return, Sharpe ratio, Treynor ratio, Jenson Ratio and tested the hypothesis with ANOVA analysis. The sample for the study consists of 340 mutual funds belonging to Money market, Debt, Equity and Balanced category funds and further classified into public and private funds. The analysis of the study showed that there is no significant difference between the returns of private and public mutual funds.

Mahmud M. & Mirza N. (2011) examined the performance of Pakistan's mutual fund industry in the period characterized both by bullish and bearish markets during 2006-10. The analysis revealed that Islamic funds have shown strong growth compared to conventional funds. Income funds appear to have suffered as a consequence of the underdeveloped bond market and very high T-bills rates which have resulted in negative excess returns during the period. With consistently negative or insignificant alphas, no fund managers outperform the market. They found that presence of government backed schemes that guarantee a constant income stream makes it difficult for other investment to compete. Islamic funds are the fastest growing fund category in the country, struggling with the steady yield but have the potential to tap into a niche in the market.

Khurana A. & Panjwani K. (2010) analyzed the performance of different mutual funds and compared the return of these funds using arithmetic, mean, compound Annual growth rate. They also analyzed the risk by finding out Standard Deviation, Beta and Sharpe and Treynor ratio were used for risk return analysis. They compared the funds with a benchmark index, volatility analysis and average return per unit to find out maximum possible losses incurred by the investor in a study period.

Parmar T. C. (2010) examined the 44 (equity diversified, balanced, index and income) mutual fund schemes of in his thesis the performance of the mutual fund industry from January 2005 to December 2009.The study took the variable as average, standard deviation, beta, R square, Sharpe ratio, Treynor ratio, Jensen measure, EPS, price to book ratio, ANOVA test as a financial performance measure. Analysis is based on Rank correlation coefficient showed that the association that is based on ranks of the observations and ANOVA (F- test) analysis on the variables. The study has been based on past performance of the only selected equity diversified scheme.

Deb S. G. & Benerjee A. (2009) attempted to highlight the importance of VaR as a measure of downside risk for Indian equity mutual funds. The study used three parametric models and one non parametric model and the weekly return of a sample equity mutual fund schemes in India to predict their weekly VaR on a rolling basis and also tested the robustness and predictive analysis of the models by employing two back testing approaches. The analysis of the study showed that the Indian equity mutual funds have exhibited considerable downside risk in terms of VaR measure. Back testing models suggest that the random walk and the moving average models suffer from a downside bias and error by understanding the VaR frequently. The limitation of the study is the endemic issue of survivorship bias stemmed from truncation of the data set due to disappearance of funds from the sample.

Debashish S. S. (2009) attempted to study in his paper the performance of selected scheme of mutual funds based on risk return relationship models and measures. A total of 23 scheme offered by six private sector mutual funds and three public sector mutual funds have been studied over the time period April 1996 to March 2009. The analysis has been made on the basis of mean return, beta risk, coefficient of determination, Sharpe ratio, Treynor ratio and Jensen alpha. The overall analysis found Franklin Templeton and UTI being the best performers and Birla Sunlife, HDFC and LIC mutual funds showing the poor below average performance when measured against the risk- return relationship models and measures. This paper concluded as in times of high stock market volatility, mutual funds are the best source of investments with assured and adequate returns provided the selection of mutual funds is in the right direction.

Kundu A. (2009) made an attempt to evaluate the stock picking performance of the growth oriented equity fund managers in India over 3 year period from April 2005 to March 2008 using Jensen (1968) and Fama (1972) measure. He had selected the 31

open ended growth oriented equity schemes on the basis of their long term existence. These sample schemes were belong to 5 public sector (13 schemes) and 9 private sector companies (18 schemes). The study had found insignificant evidence for superior returns due to stock selectivity of the fund managers and mutual fund schemes, on an average, had not impacted selectivity performance. The impact of the expected risk premium for the schemes was reported to be very high in this study.

Somya G. D. (2008) used some additional, measures like information ratio, appraisal ratio and M^2 measure other than conventional performance measures to bring out additional information about the competence of the fund manager. He observed that the study period from January 2000 to December 2005 could broadly divided into two phases, the first being a bear period while the second one being a predominantly bull period. It was found that the equity funds not only have done poorly with respect to all the performance measures during the bear phase(P1), they were also outperformed by their benchmarks during the bear phase which should be a considerable worrying factor for the ordinary investor. He also found that during the out of sample period, which is an outright bull period, the funds have outperformed well on an average but their benchmarks have performed even better. Study was concluded highlighting the intrinsic weaknesses in the mutual fund industry at the moment and suggested a few measures that could be taken to ensure good governance and investor protection and general betterment of the industry as a whole.

Somashekar T. S. (2008) in his thesis examined the performance of actively managed equity funds using the variance and semi variance approaches to risk. This study evaluated the performance by measuring Time Weighted Return (TWR), Standard deviation, Sharpe ratio, Information ratio, Sortino ratio and CAPM model. He analyzed the impact of regulations on performance by comparing funds under weaker regulations and funds under stronger regulations funds that come under SEBI. The limitation of the study was the scale is hampered by the lack of hedonic variable such as number of investor in a fund and the division of a fund asset into retail and institutional investors.

Soumya D. G. et al. (2007) did a return based analysis of equity mutual funds in India using quadratic optimization of an asset class factor model proposed by William Sharpe. The data used in the study covers the period from January 2000 to January 2005. They have used monthly return data of Indian equity mutual funds and their relevant benchmarks. They considered only the equity mutual funds which belong to

ELSS and Growth group. They found the styles benchmarks of each sample of equity funds as optimum exposure to eleven passive asset class indexes. They also analyzed the relative performance of the funds with respect to their style benchmarks. The result of the study showed that the funds have not been able to beat their style benchmarks on the average.

Lakshmi N. (2007) analyzed the performance of Indian mutual fund industry using various techniques such as CGR, CAGR, Pearson's Correlation, Autocorrelation, Rank Correlation, Coefficient of determination, Kendall's Coefficient of Concordance, Chi- square test, Z test and ANOVA (F test). The performance in terms of NAV of growth schemes with growth option alone were studied from the angle of risk and return in comparison with the benchmark (BSE 100) index from April 1998 to March 2006. The analysis revealed that the entire seven schemes covered under the study showed negative risk premium, Sharpe index and Treynor index indicating that the returns of sample scheme were insufficient to cover the risk free rate and for the risk undertaken by the investors. The overall analysis of the sample schemes for the entire study period reveals that return from Franklin India prima was the highest among the entire sample scheme. The Eugene Fama's decomposition of total returns states that the negative value of returns on systematic and unsystematic risk imply that the market return was less than the risk free return. The return on systematic risk was the highest in the case of HDFC capital Builder scheme and the lowest in the case of SBI magnum multiplier plus scheme. The return on unsystematic risk was the highest in the case of HDFC capital builder scheme. The return from stock selectivity was positive implying that the sample schemes had earned superior return due to stock selectivity. The Z test revealed the existence of impact of market returns on all the schemes with a high degree of positive correlation. The study suggested that the fund managers have to provide the benefits of professional management by way of market timing and stock selection skills.

Anand S. & Murugaiah. (2006) attempted to examine the components and source of investment performance in order to observe return which is due to the ability of manager to pick up the best securities at given level of risk. The study covers the period between April 1999 and March 2003 and evaluates the performance of mutual funds based on 113 selected open ended schemes having exposure to more than 90 per cent of the corpus of equity stocks of 25 fund houses. They have adopted the Fama's methodology in this research paper. The observed that the mutual funds were not able

to compensate the investors for the additional risk that they have been taken by investing in the mutual funds. The study concluded that the influence of market factor was more severe during negative performance of the funds while the impact selectivity skills of funds managers have influence more than the other factors on the fund performance in times of generating positive return by the funds. It can also be observed that selectivity, expected market risk and market return factors have shown closer correlation with the fund return.

Panwar S. & Madhumathi R. M. (2006) used sample of public sector and private sector funds of varied net asset to investigate the differences in characteristics of asset held, portfolio diversification on investment performance for the period May, 2002 to May, 2005. The study found that public sector sponsored funds do not differ significantly from public sector sponsored funds in terms of mean return per cent. The study was also found that there was a statistical difference between sponsorship classes in terms ESDAR (excess standard deviation adjusted returns) as a performance measure. The model built on testing the impact of diversification on fund performance and found a statistical difference among sponsorship classes when residual variance was used as a measure of a portfolio diversification and excess standard deviation adjusted returns as a performance measure. The study found that public sector sponsored, private sector sponsored and foreign mutual funds do not differ statistically in terms of portfolio characteristics such as net assets, common stock per cent market capitalization holding. The general linear model of analysis of covariance establishes differences in performance among the three classes of mutual funds in terms of portfolio diversification.

Mishra B. & Rahman M. (2002) measured mutual fund performance using Lower Partial Moment (LPM). In this paper, measures of evaluating portfolio performance based on lower partial moment and the three traditional measures by Treynor, Sharpe and Jensen based on the mean variance rule which is valid only when the distribution of asset returns is characterized by spherical symmetry to which normal and similar distributions belong. Risk from the lower partial moment is measured by taking into account only those states in which return is below a pre specified target rate like risk free rate. They found that almost half of the funds had LPM beta lower than the CAPM beta instead of LPM beta which is not the correct risk measure when return distributions are not normal. In almost all cases, the overall risk of the mutual funds, as measured by the sigma type measures is higher than the market.

Rao N. S. & Ravindram M. (2002) examined the performance evaluation of Indian mutual fund industry in a bear market was carried out through relative performance index, risk-return analysis, Treynor's ratio, Sharpe's ratio, Jensen's ratio and Fama's measure. The data was monthly closing NAV's collected from Association of Mutual Funds in India (AMFI) for the period of September 1998 to April 2002 (bear period) of 269 open ended scheme. They excluded the funds whose return were less than risk free returns, 58 schemes were used for further analysis. The result of relative measures suggested that most of the mutual fund schemes in the sample of 58 were able to satisfy investor's expectation by giving excess returns over expected returns based on both premiums for systematic risk and total risk.

Shukla R. & Singh S. (1997) studied the performance of global equity mutual funds the issues related to global fund performance. They analyzed the total risk adjusted performances of the two samples were compared in up and down domestic market. The finding of the study suggested that the global equity mutual funds were superior performers when compared to global benchmark i.e. Morgan Stanley Capital International (MSCI). The US domestic equity funds outperform the global funds in terms of total as well as risk adjusted returns.

2.4 STUDIES RELATED WITH MARKET TIMING PERFORMANCE

Market timing ability is the ability of asset management companies to use superior information about the future realization of common factors that affect overall market returns. An asset management company with market timing ability may alter the asset allocation between stocks and safe assets or among other broad asset classes. This section deals with the review of the studies related with market timing ability of fund manager in the context of international studies and Indian studies.

INTERNATIONAL PERSPECTIVE

Angelidis T. et al. (2013) introduced a new factor exposure based approach for measuring the static and dynamic timing capabilities of asset managers. The study had taken the database from September 1998 to June 2012 of equity mutual fund schemes from CRSP mutual fund, risk factor and style portfolio returns were obtained from website of Kenneth French. The research suggested that evaluating stock selection skill and market timing ability in a way that was consistent with common asset

management practices. They concluded that earlier studies were failed to measure skill stock selection and market timing because they ignore the manager's self-reported benchmark in the performance evaluation process.

Skrinjaric T. (2013) attempted to find evidence of market timing abilities of Croatian funds estimating Treynor-Mazuy and Henriksson-Merton model over the sample of ten mutual funds. He selected the sample of ten funds based on highest assets in 2010 and 2011 in Croatia and monthly data was collected from December 2002 to November 2011 for analysis. The result had indicated a lack of market timing abilities of selected funds and the reason was lack of good forecasting abilities and presence of defensive behavior.

Bodson L. et al. (2012) globally investigated the market timing abilities of mutual fund managers from three perspectives i.e. market return, market wide volatility and aggregative liquidity using Fama and French (1992) model augmented by Carhart (1997) momentum factor to model mutual fund returns. They proposed a new specification to study market timing and allowed mutual fund market betas to follow a random walk in the absence of market timing ability instead of considering an average market exposure for mutual funds. The study found that on average 6 per cent of mutual funds display return market timing abilities while this per cent for volatility and liquidity market timing was 13 and 14 respectively. They also analyzed market timing by investment strategies and for surviving strategies for dead funds.

Eleonora G. (2012) in their research evaluated the performance of 220 open ended equity mutual funds of European countries (from weak and strong economies) for a period of 8 years from January 2004 to December 2011. He split the study period in two four year sub periods in order to examined their performance prior to global financial crisis and after its brunt in 2008. The stock indices of the countries were taken as a benchmark to compare the performance of mutual funds by using weekly NAV. The study applied Sharpe ratio, Treynor ratio, Jensen alpha, Treynor & Mazuy model, information ratio, Risk Adjusted Performance (RAP) measure, and Market Risk Adjusted Performance (MRAP) measure. He found that fund managers reported absence of market timing, no mutual fund showed abnormal returns and information ratio indicated that only Italian fund managers had stock picking abilities.

Sheikh M. J. & Noreen U. (2012) analyzed the performance of the fund managers and their market timing abilities. For this purpose they had taken sample of 50 U.K. mutual funds on random basis and their returns from the beginning of 1990 to the end

of 2008 were used for hypotheses testing. The study employed two widely accepted performance measurement techniques i.e. Jensen alpha measure and Treynor and Mazuy market timing hypothesis. They concluded that the fund managers lacked the ability to predict the market movement on consistent bases. They were unable to outperform the market and could not beat the benchmark. They found that fund managers also lack market timing abilities which support the efficient market hypothesis proposed by Fama and any chance of outperforming the market was merely a random chance and this could not be done on consistent bases.

Villadsen M. (2011) provided a performance analysis of 60 Danish mutual funds in the period from 2001-2009. The analysis covered three investment categories i.e. Danish stocks, European stocks, and Global stocks. In order to analyze the performance of the mutual funds, relevant benchmarks had been chosen, to see whether the mutual funds were able to outperform those benchmarks or not. This study includes the investment performance measures and market timing models (T&M Model) to evaluate the performance of sample mutual fund schemes. It was found that 8 mutual fund schemes investing in Danish stocks showed significant timing abilities and in remaining schemes timing abilities were nort present.

Suppa Aim T. (2010) specifically investigated mutual funds in Thailand, using a more extensive dataset to scrutinize how the fund managers perform and what strategy they used in Thailand. The study considered 230 equity and flexible open mutual funds in Thailand from June 2000 to August 2007 and weekly data was collected from AIMC. He found that mutual fund managers did not have selectivity or market timing ability and they did not give value added to investors. Most of the fund managers in Thailand invested heavily in small and growth stocks. Flexible fund managers were more active and adjust their portfolios dynamically according to economic information. The study concluded that tax benefit funds performed better than general funds.

Duda K. B. P. (2009) utilized the various performance as well as risk measure in order to assess performance and risk within mutual and hedge funds on Danish market. They used risk adjusted performance measures along the lines of Sharpe, Treynor, Modigliani, Sortino measure and single index Jensen alpha to analyze the selectivity of Danish mutual funds. Treynor & Mazuy and Hensiksson & Merton model are also used to assess the market timing abilities of the fund managers. They concluded that on average Danish mutual equity funds perform neutrally and possess

market timing abilities. Their risk adjusted performance was fairly poor over study period. The findings of the study showed that option strategies contribute to a better explanation of hedge funds return and also proof that hedge funds were able to generate abnormal returns during the analyzed period of 9 years.

Saez J. C. (2009) attempted to analyze market timing over non-simultaneous periods. In his empirical study of a sample of Spanish mutual funds, the dynamic beta was estimated with Kalman filter. Market timing was analyzed by comparing changes in beta and market return. No evidence of timing was found in the simultaneously case. With large windows, in the non-simultaneously case, the number of funds with positive and negative timing increases. When the result was compared with that achieved by passive buy-and-hold portfolios, it seems that many mutual funds do not follow this strategy and that they time the market negatively in the long term.

Christensen M. (2005) conducted research to evaluate the investment performance on the Danish mutual fund industry. The objective of the study was to measure the selectivity, market timing and persistency. In this study three performance factors were analyzed. He examined 47 Danish mutual funds (equity and fixed income) over the sample period from 1996 till 2003 and found that the Danish mutual funds perform neutrally, returns are non-persistent and Danish mutual funds have no timing ability.

INDIAN PERSPECTIVE

Ramesh B. & Dhume P. S. (2014) analyzed the market timing ability and stock selection skills of Indian mutual fund managers for the period 2001-12 using Treynor & Mazuy model. In order to achieve this objective, a sample of 68 open ended equity diversified mutual fund schemes had been selected. The study revealed that Indian mutual fund managers were not good at timing the market whereas they possess excellent stock selection skills for choosing the portfolio. They were not able to outperform the market using their skill of timing ability. This research paper is confine to only Treynor & Mazuy model to evaluate the market timing ability of the Indian fund manager.

Roy S. (2014) tried to examine the market timing performance of the selected open ended mutual fund schemes of UTI based on traditional as well as conditional measures. It was assumed that use of predetermined public information and capture of tie variation in Treynor & Mazuy measures produce better market timing performance than traditional measures. He examined the conditional performance of 30 sample

open ended mutual fund schemes for a period of 12 years i.e. 2001 to 2012. It was found that 6 schemes had offered positive market timing ability in traditional model but after inclusion of public information variables in the traditional model positive market timing performance had increased from 6 to 7 schemes. The study reported that after conditioning public information variables in model measure the market timing performance look better than the traditional model but the statistical tests revealed that the market timing performance based on two measures was same.

Bhuveneswari P. & Selvem M. (2011) aimed to examine the market timing abilities of Mutual Fund Managers in India by using Treynor & Mazuy and Henriksson & Merton (conditional model). They had covered a period of 6 years from January 2002 to December 2007 and selected 21 mutual fund schemes of different categories fall under bank sponsored, institution and private sector. The overall result indicated that the Indian mutual fund managers did not have adequate information efficiency and public information variables are important while evaluating market timing ability. The study concluded that growth of Indian Mutual Fund Industry mainly depends on Mutual Fund Managers whose skills in market timing would improve the confidence of the investing public in mutual fund.

Satyasekhar G.V. (2011) was intended to examine the modeling dimension of measuring performance of mutual funds during the last 50 years which leads to innovative research in financial modeling of mutual fund's performance measure. The various statistical tool used in this paper such as Jensen model, Fama model, Treynor and Mazuy model, Statmen model, Choi model, Elango model, Chang Hung and Lee model and MM approach to evaluate the performance of global mutual funds.

Guha D. S. et al. (2007) identified the market timing and stock selection as a possible method that are presumed to be used by fund managers for generating superior performance. They attempt to find the stock selection and market abilities of the Indian mutual fund managers using unconditional as well as conditional approaches. With a sample of 96 mutual fund schemes, a lack of market timing ability and presence of stock selection ability were observed among the Indian funds managers in both unconditional as well as conditional approaches. They used regression technique for various categories of funds as well as for the entire sample which also showed a lack of market timing abilities and presence of stock selection abilities.

Sondhi H. J. & Jain P. K. (2006) pointed out that financial performance of equity mutual funds depends upon the aggregate performance of individual stock held in the

mutual funds portfolio. This study examined market timing skills of the fund managers of diversified equity fund operating in India. An analysis is based on sample of 36 equity mutual funds drawn from 21 asset management companies. The study period is 9 years and T-test has been applied to assess significance of the timing parameters. Dummy variable regression model has also used in this study to estimate timing parameters of the sample equity mutual funds. Result shows that market timing of the vast majority of equity mutual funds have been successful. 25 out of 36 equity mutual funds have produced positive timing parameters. However only four of them have been statistically significant.

Tripathi N. P. (2006) evaluated the market timing abilities of Indian fund managers of thirty one tax planning schemes in India over the period December 1995 to January 2004 by using Jensen & Mauzuy model and Henriksson & Merton model. The objective of the study was to examine the market timing abilities of Indian fund managers to reward higher return to the investors. The result indicated that Indian mutual fund managers were not able to time the market correctly and the fund managers have not been successful in reaping returns in excess of the market; rather they were timing the market in the wrong direction.

Dhar J. (2005) made an attempt to evaluate the investment management of Indian mutual funds in terms of selectivity and timing abilities of fund managers for a sample of twelve schemes during April 1997 to March 2003. The study had also examined other relative issues such a s selectivity and fund characteristics, persistence of stock selection performance market timing and fund characteristics, consistency of market timing and market timing and selectivity. The result revealed that majority of the fund managers had superior selectivity skills based on Fama criterion while fund managers of open ended schemes were better performers than close ended schemes. It was also found that public sponsored schemes were superior performer in terms of selectivity. Selectivity and market timing were found positively correlated for Indian fund managers during the study period.

Tripathi N. P. (2005) evaluated the performance of thirty one tax planning schemes in India over the period 1994-95 to 2001-02 in her research paper. She studied the return and risk situation of 31 sample schemes over the seven year period to judge the performance of the professional investment experts in India. To examine the market abilities of Indian fund managers, two models i.e Treynor and Mazuy model and Henriksson and Merton model have been applied to achieve risk return tradeoff. The

result indicate that the fund managers under study have not been successful in reaping returns in excess of the market rather they were timing the market in the wrong direction. There was only one scheme where timing ability of the fund managers was exhibited

Irissappane A. (2000) concluded in his thesis that mutual fund manager cannot consistently time the market or select underpriced securities and long term performance of individual mutual fund can best be described as random. The objective of the thesis is to study the investment pattern of mutual funds and analyze scheme wise performance of the close- ended funds of UTI, LIC and Canbank mutual funds. The reference period of the study is for 10 years from June 1988 to July 1998 and 34 close ended growth and income schemes of selected mutual fund institutions. The various performance measure used in thesis are Sharpe ratio, Treynor ratio, Jensen measure, Herkinsson & Merton model and Treynor and Mazuy model. The result indicates that the insignificant co-efficient in both estimated models highlighting that in 28 out of 34 schemes, the fund managers have lost the chance of gaining from scheduling with response to chance in the market. The study revealed that the fund managers just could not cope up with investors' expectations due to their inherent fear for risk which leads to situation of keeping the portfolio static. This study suggested that the fund managers have to primarily concentrate on superior portfolio management techniques in managing their corpus and generate reasonable returns to the investors.

2.5 OTHERS STUDIES

In this section, some international and Indian studies are reviewed which are important for research. The earlier studies related with performance of asset management companies- industry specific, impact of specific determinants, competition, comparison of public sector and private sector taken into consideration.

INTERNATIONAL PERSPECTIVE

Garcia J.V. (2013) examined the persistence in performance of style consistent European equity mutual funds between 1988 and 2010 and investigated whether the persistence effect was related to investment style. To check whether past performance carried information about the future, he used monthly data for the six largest European mutual fund countries. The study found statistically and economically

significant performance persistence and persistence is much more pronounced for the top and bottom performers. The past performance of European mutual funds have explanatory power for future performance and investors can obtain useful evidence from past performance data.

Hunter D. et al. (2013) proposed a simple approach to account for commonalities in mutual fund strategies that relied on information on fund return and investment objectives. Their approach augmented that commonly used factor models with an additional benchmark represent an equal investment in all same category funds which is called an active peer benchmark (APB). Authors collected the monthly NAV of only no load US mutual fund from January 1980 to December 2010 and conduct the tests of persistence of performance. They found the APB's reduced the average time series correlation of residuals between individual funds within a group when added to a four factor equity model. An addition of these significant APB improves the selection of funds with future performance.

French Asset Management Association. (2012) described in their report the performance of asset management companies in French market in 2010. The key data revealed that total asset under management grew by €44 billion, bringing it to €2656 billion in December 2010, recovering the pre crisis period. According to the report total asset under management in Europe rose by 9 per cent or by €663 billion. France asset management industry remained the leader with a 20.65 per cent market share followed by Germany (19.4) per cent and the UK (16.9 per cent). The total asset management companies were 592 at the end of December 2010.Two companies rank among the world's top ten asset management group and four were among the top twenty.

Reddy S. R. et al. (2011) attempted to throw light on the pre and post purchase informational needs of the mutual fund investors and also to know the investor's knowledge of mutual fund evaluation. The primary data has been collected through questionnaire administered from 555 investors and secondary data collected from magazines, Journal, Books and web sites. They used simple per cent analysis, mean standard deviation and t-test for analysis of the data. Survey findings of this study have got significant implication that can be followed by the mutual fund companies either by adding to the existing practices or by replacing.

Banko John et al. (2010) examined the market concentration, economies of scale, economies of scope and the relative size of a particular fund within a fund family as

determinants of mutual fund expense ratio. This examination was also focused at the asset manager level and based on the Morningstar equity and fixed income style classification. The data items were taken from the years 1997 to 2006 and modified so that the items for separate classes of a fund were merged into data for a single fund. The result demonstrates that there was a negative relation between the scope of funds handled across the Morningstar classification by a particular fund manager and the expense ratio for particular fund. The result also showed that the largest fund within a family was associated with the highest expense ratio in the family.

Nazir S. M. & Nawaj M. M. (2010) investigated the role of various factors in determining the mutual funds growth in Pakistan. The panel data for the period 2005 to 2009 has been used for 13 family equity mutual funds and fixed effect and random effect models have been applied for estimation of determinants of mutual funds growth in Pakistan. The result has suggested that assets turnover, family proportion and expense ratio are positively leading the growth of mutual funds, in contrast with management fee and risk adjusted returns which are negatively associated with mutual funds growth. This study also provides some practical implication for the fund managers as well as the prospective investor in the equity markets.

Urakabe A. (2010) discussed the current state of the asset management business in Asia, business opportunities and barriers to the entry of foreign asset management companies and the asset management capabilities required for Japanese asset management companies to achieve growth in non Japan Asia. This paper also discussed the globalization of the asset management business in Asia and briefly summarized the business environment in Asian retail and institutional markets.

European Fund Asset Management Association. (2009) briefly described in their annual report the various facts and figures of Asset Management in Europe at the end of 2007. In the report asset under management is compare with the employment in European countries. They mentioned the industrial organization and products and management of the asset management industry. The report found that UK has a highest AUM/GDP ratio as 224 per cent highest in European countries. In the end, report measured the impact of financial crisis on the value of the asset management.

Munro J. & Liu B. (2009) discussed in their report the demographic trends and regulatory development of asset management industry. The countries were taken into consideration are Australia, China, Hong Kong, India, Japan, Korea, Singapore and Taiwan and forecasted the compound growth rate of asset under management in 2015.

It also discussed short term challenges for asset management industry i.e. performance in volatile market and fragmented nature of the Asian market place.

Smith D. (2008) provided in his article a brief history of publicly sponsored asset management companies (AMC'S) particularly in the crisis- affected countries of Malaysia, Thailand, Indonesia and South Korea, described their asset purchase method and compare their resolution results and future prospects. The four AMC'S discussed in this paper are Danahatra in Malaysia, Thai Asset Management Company (TAMCO) in Thailand, Indonesia Bank Reconstructing Agency (IBRA) in Indonesia and Korea AMC (KAMCO) in South Korea.

Ferruz L. et al. (2007) provided a wide perspective of socially responsible investment, especially regarding mutual funds. They studied a general view of trends in the most important collective investment industry and attention was focused on the Spanish market. They compared mature mutual fund industry in developed country in this aspect. A socially responsible mutual fund have shown an increase both in total net assets and in number of investors but the sector is by far behind the United States regarding the share of mutual fund industry devoted to screened funds. Finally they concluded that investing in socially responsible mutual funds, individuals have more facilities to screening the targets companies within professional management.

Walter I. & Sisli E. (2007) focused on the structure, conduct and performance of asset management industry with special reference to its evolution in the context of Asian economies especially in China, Indonesia, Korea, Malaysia, Singapore, Philippines and Thailand. This paper also focuses on the size and growth of the respective financial market, asset allocation, the regulatory environment and the state of internationalization of the fund management industry. It links these evolutions of professional management in this environment to the development of the respective capital markets and the evolution of corporate governance. The finding of the paper was that the fund management industry occupies a very small niche in domestic financial system that is dominated by banks.

Fung Ben et al. (2004) examined the common characteristics and difference in the Asian government owned asset management companies. It also emphasized on the framework for establishment of each country's asset management company, the transfer of asset to these companies and financing issues. This paper identified number of important factor that contribute to the successful operation of Asset Management Company.

Hagiwara A.T. & Pasdilla G. (2004) examined the performance of Asian asset management companies. They claimed that AMC's can trigger moral, hazard inspired bank lending resulted in creating more new Non Performing Loan's in case of public AMC's. This paper also found than the some institutional consideration significantly decrease in new NPL in foreign banks and finance companies. The reason was because foreign banks are generally considered better managed institution while the surviving finance companies in their sample were those that were relatively better run compared to the ones that were closed down by the government early on due to Asian crisis.

Baks P. K. (2003) examined the performance of mutual fund managers using a newly constructed database that tracks 2086 managers of domestic diversified equity mutual funds. This paper also recognizes that one never observe performance outcomes of managers and funds independently but only in junction with each other. They measured the abnormal performance as a Cobb-Douglas production function with manager and fund inputs and found that manager's contribution ranges from approximately 10 to 50 per cent. This study concluded that the fund is more important than the manager for performance.

Saxton J. (2002) chairman of JEC provided a brief analysis of mutual fund industry in US. He focused on growth of mutual fund industry, competition of mutual fund industry, effects of competition on mutual funds and implication for capital gains taxes on mutual fund distributions. The study used indifference curve technique to analyze the risk return trade off and to measure the taxation lower investor satisfaction and forces.

Shojai S. et al. (2001) provided in their paper an appraisal of how London has become the world's largest market for asset management and evaluate it possesses the attributes necessary to sustain success in near future. The findings of the study indicate that the increase number of US asset management firms in London has been very beneficial to mutual fund companies of UK. Through US firms, London based institutions have gained knowledge of the latest asset management skills and style.

Shojai S. & Preece R. (2001) examined in their paper the current environment and overview of US asset management industry from 1985 to 1999. They concluded that the mutual fund industry will undergo a evolution similar to that of the brokerage market. They predicted that fees will down, the number of funds will be reduced.

Investor will grow in power and importance and manager will have to be very good to remain in the business.

Walter I. (1999) focused on industrial organization and international competition of the asset management industry. It began with a schematic of asset management in context of national and global flow of funds, identifying the types of asset management functions that are performed and how they are linked into the financial system. Relevant comparison was drawn between the United States, Europe, and Japan and selected emerging market countries followed by a discussion of the competitive structure, conduct and performance of the asset management industry and its impact on global capital market.

Grinblatt M. & Titman S. (1989) assessed gross returns based on a sample of mutual fund quarterly holdings from 1975 to 1984. They specified that the sample is not subject to survivorship bias and consists of data comprised of net returns. They conducted performance tests over their sample chosen and found indication that the risk-adjusted gross returns of some funds were significantly positive.

INDIAN PERSPECTIVE

Lohana P. M. (2014) provided a overview of growth of mutual funds in India during 2009-10 to 2013-14. She evaluated the pattern of asset under management from the beginning of the industry and the resource mobilization of public and private sector companies within the study period. The study consists of various characteristics of the industry such as scheme wise classification and number of folios to depict the growth of mutual fund companies in India during the study period.

Narayanasamy R. & Rathnamani V. (2013) in their research paper focused on the financial performance selected mutual funds through the statistical parameters such as alpha, beta, standard deviation, r-squared and Sharpe ratio. The study comprised of 5 mutual fund schemes of private sector and the time period was taken from January 2010 to December 2012. The NAV of the selected schemes had been compared for three years and also compared with benchmark return to evaluate the performance. The findings of this research paper showed that majority of the funds performed well in high volatile market and index return had positive impact on the performance of mutual funds during the study period.

Sarish & Jain A. (2012) tried to found out the investor preference, awareness and investment rationale towards the mutual funds. They tested the significant relationship between mutual funds and other financial instruments and whether the performance of

the funds depends upon the performance of the stock market. The study was carried out through questionnaire survey in Delhi/NCR. Hypothesis was tested through Z- test and Chi- Square and finding revealed that majority of investor are aware about the mutual funds and are willing to invest in mutual funds

Pattanaik B. & Arvind M. S. (2009) conducted an extensive research on the various types of funds and covered the analysis of pension funds, hedge funds and mutual funds. The main focus was on the analysis of these funds in terms of geographic asset under management, asset allocations, and strategies being followed and the changes happening due to recent turmoil. The result obtained from the survey generally give a mixed picture about financial market response to the financial crisis but there are some common significant trends which become quite evident from the research such as decrease in allocation and increase in overall equity and cash allocation in all major funds.

Subrahmanyam N. (2009) analyzed the growth of bank owned asset management companies from the erstwhile assured return schemes to market determined return schemes. This study also tried to explore the inter linkages between capital and risk for Indian public sector banks system of changes in the regulatory framework. To test the objective, the period was taken from June 2005 to December 2008 and weekly return of equity mutual funds and their relevant benchmarks taken into consideration. The finding of the study proved that different groups of the sample mutual funds had performed differential performance in terms of benchmark comparison. The performance of the open ended, small sized and private sector sample equity funds had shown better performance. The study concluded that there may be an optimal size of managed portfolio which may produce better performance.

B.S. Sumalatha (2007) made an attempt to analyze the structure of the mutual fund industry in India and to examine the state of competition among the mutual funds, sector wise competition and within sector competition. She tried to understand whether the structural changes in the industry had led to the competition among the mutual funds. For this purpose, the study analyzed competition among the mutual funds which includes private sector, public sector and foreign mutual funds.

Rao D. N. (2006) aimed to investigate the performance of select open ended equity mutual fund for a period of April 2005 to March 2006. The reason for adopting relatively shorter span of time period supported with the statement that it would facilitate studying the short term and transient effects of style factors on fund

performance. The study was limited to open ended equity schemes as they constitute ninety six per cent of the total assets held by Asset Management Companies. The study brought out the fact that the most of the Growth plans were better than dividend plans in terms of superior returns and in terms of risk 14 out of 21 growth plans had lesser risk and in terms of risk per return 13 out of 21 dividend plans had higher coefficient of variation than growth plans.

Table 2.1 Summary of Main Studies

Author(s)	Objectives	Data & Sample	Methodology	Conclusion
Herfindahl O. C. (1950)	To measure the concentration level of the industry.	USA steel industry.	HHI Index	Developed the concentration ratio and Herfindahl index and showed the concentration level of US Steel through the Lorenz Curve.
Treynor (1965)	To find out the suitable measure to evaluate the performance of portfolio.	US sample mutual fund scheme	Treynor Measure	Suggested a new predictor of mutual fund performance, differs from virtually all those used previously by incorporating the reward to volatility ratio.
Sharpe (1966)	Extend the research of Treynor and to construct Sharpe Ratio	34 US mutual funds & (1954-1963)	TreynorMeasure, Sharpe Measure and Rank Correlation between two time segments.	The difference in performance is due solely to differences in investment objectives which support the view of market efficient. Past performance partly explains future performance.
Treynor and Mazuy (1966)	Propose a model for measuring market timing ability (TM)	57 US mutual funds (Growth and Balanced funds) & (1953-1962)	Treynor&Mazuy market timing model	No statistically evidence that funds managers have successfully outguessed the market.
Jensen (1968)	Propose single-index measure (Jensen) to evaluate performance	115 US mutual funds & (1945-1964)	Jensen measure	Funds, on average, are unable to outperform the market benchmark even before deducting fee and expenses. At fund level, only 3 funds statistically outperformed the market.
Fama (1972)	To suggest the several components of measuring	US mutual fund	Fama Measure	Observed return of a fund could be due to the ability of fund managers to pick up best securities at a given level of

	the overall performance of managed portfolio.	schemes		risk (selectivity), it could also arise due to prediction of general market price movements i.e. their timing ability. Selectivity can be further decomposed into net selectivity and Diversification
Henriksson& Merton (1981)	To develop more qualitative approach of measuring the market timing than previous studies.	67 mutual funds & 1968-80	Henriksson& Merton Market Timing Model	They conclude that the unconditional market timing models are misspecified, since the results show negative market timing performance even if they are in the buy-and hold strategy portfolios.

REFERENCES

Anand S. & Murugaiah. (2006). Analysis of components of investment performance-An empirical study of mutual funds in India. 10th Capital Market Conference, Indian Institute of Capital Markets, *Social Science Research Network (SSRN), Retrieved from http://ssrn.com/abstract=961999*

Angelidis T. et al. (2013). Revisiting mutual fund performance evaluation. *Journal of Banking & finance, 37*, 1759-1776.

Annapoorna M.S. & Gupta P.K. (2013). A comparative analysis of returns of mutual fund schemes ranked I by CRISIL. *Tactful Management Research Journal, 2*(1), 1-6.

Avramov D. & Wermers R. (2005).Investing in mutual funds when returns are predictable. *Journal of economics, 81*(2), 339-377.

Baks P. K. (2003). On the performance of mutual fund managers. Working paper, *Emory Universitty,* Atlanta.

Banko J. et al. (2010). Economies of scope and scale in the mutual fund industry. *Managerial Finance,36*(4), 322-336.

Bhuveneswari P. & Selvem M. (2011). Market timing ability of Indian mutual fund managers under conditional model. *Social science research network,* Retrieved from http://ssrn.com/abstract=1910764 orhttp://dx.doi.org/10.2139/ssrn.1910764

Bodson L. et al. (2012). A global approach to mutual funds market timing ability. *Journal of Empirical Finance, 20*, 96-101.

Brown K. C. et al. (2011). Investment style volatility and mutual fund performance. retrieved from http://www2.mccombs.utexas.edu/faculty/keith.brown/Research/stylevolatility-wp.pdf (re draft on April , 30, 2012).

Chinchane N.B. (2008). Comparative analysis of mutual fund on the basis of alpha, beta and standard deviation.(Project Report).*St. Mira Viswakarma Institute of Management, Pune.*

Christensen M. (2005). Danish Mutual Fund Performance: Selectivity, Market Timing and Persistence, *Finance Research Group, Aarhus School of Business,* Working Paper No. F-2005-1.

Debashish S.S. (2009). Investigating performance of equity- based mutual fund scheme in Indian scenario. *KCA journal of business management, 2* (2), 1-15.

Detemple B. Jerome & Gottardi. (1996). Aggregation, efficiency and mutual fund separation in incomplete market. *Economic Theory, 11*, 443-455.

Dhanda S.K. et. al. (2012). Performance evaluation of selected open ended mutual funds in India. *International Journal of Marketing, Financial Services & Management Research, 1*(1), 29-38

Dhar J. (2005). Investment performance of mutual funds: Evidence of market timing and selectivity from India 1997-2003. *UGC sponsored minor research project*, 1-28

Duda K. B. P. (2009). Performance and risk evaluation of Danish mutual and hedge funds. (Unpublished Doctoral thesis).*University of Aarhus*, Denmark.

Eleonora G. (2012). Performance of mutual funds in European countries. (Unpublished Dissertation) *University of Piraeus*, Greece.

European Fund Asset Management Association. (2009).Asset management in Europe: facts and Figures, Retrieved from http://www.efama.org/index2.php?option=com_docman&task=doc_view&gid=967&Itemid=35, accessed on April 11, 2012.

Fama, E. F. (1972). Components of Investment Performance. *Journal of Finance,27*, 551- 567.

Ferruz L. et al. (2007). Social Responsible Investment: Mutual Funds. Global and Local Trends. *The International Journal of applied Economics and Finance, 1*(2), 120-125.

French Asset Management Association. (2012), *The French Asset management market in 2010*, Retrieved from http://www.afg.asso.fr/index.php?option=com_content&view=article&id=3829&Itemid=310&lang=en&showall=1, accessed in April 12, 2012.

Fung Ben et al. (2004). Public asset management companies in East Asia- Case studies. *Asia Financial Stability Institute, Occasional paper no. 3.*

Garcia J.V. (2013). The Persistence of European mutual fund performance. *Research in International Business and Finance, 28*, 45-67.

Garg M. (2014). A study of performance evaluation of selected mutual funds in India (Unpublished Doctoral Thesis), *Maharishi Markandeswar University*, India.

Gohar et al. (2011).Performance comparison of mutual funds in Pakistan. *African Journal of Business Management, 5*(14), 5583-5593.

Grinblatt M. & Titman S. (1989). Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings, *Journal of Business, 62*, 393-416.

Habib A. (2010). Portfolio performance evaluation: Investment corporation of Bangladesh. *Journal of economics and sustainable development, 1*(1), 1-11.

Hagiwara A.T. & Pasdilla G. (2004). Experience of Asian asset management companies: Do they increase moral hazard? Evidence from Thailand. *Asian Development Bank publication, Economic Working Paper No.55.*

Henriksson R. D. & Merton R. C. (1981). On Market Timing and Investment performance. II. Statistical Procedures for Evaluating Forecasting Skills. *Journal of Business, 54*(4), 513-533.

Herfindahl O. C. (1950). Concentration in the US Steel Industry(Unpublished Doctoral Thesis), *Columbia University*, U.S.A.

Hooper K. et al. (2006). Persistence in Mutual Fund Returns: New Zealand evidence. *Accounting Research Journal, 19*(2), 105-121.

Hunter D. et al. (2013). Mutual fund performance evaluation with active peer benchmarks. *Journal of Financial Economics, 112*, 1-29.

Ippolito A. R. (1989). Efficiency with costly information: A study of mutual fund performance, 1965-1984. *Quarterly Journal of Finance, 104* (1), 1-23.

Irissappane A. (2000). Paradigm shift in the performance of Indian mutual funds: An analysis with reference to close ended funds of selected institutions, (Unpublished Doctoral Thesis). *Pondicherry University,* India.

Jagric T. et al. (2007). Risk – adjusted performance of Mutual Funds: Some Tests. South- Eastern Europe. *Journal of Economics, 2*.233-244.

Jensen, M. C. (1968). The performance of mutual funds in the period 1945-1964.*Journal of Finance, 23*(2), 389–416.

Karatepe Y. &Gokgoz F. (2006).Style analysis of Turkish mutual funds. *International Reserch Journal of Finance and Economics, 2*, 88-105.

Kaushik A. & Barnhart S. W. (2009). Do mutual funds with few holdings outperform the market? *Journal of Asset Management, 9*(6), 398-408.

Khurana A. & Panjwani K. (2010). Hybrid mutual funds: An analysis. *APJRBM, 1*(2),

Kumar L. N. & Devi R. V. (2011). Performance evaluation of private and public sponsored funds in India. *International Journal of Research in Commerce and Management, 1*(2), 24-35.

Kundu A. (2009). Stock selection performance of mutual fund managers in India: An empirical study. *Journal of Business and Economics Issues, 1*(1), 60-72.

Lai M. M. & Lau Siok H. (2010).Evaluating mutual fund performance in an emerging Asian economy: The Malaysian experience. *Journal of Asian economics, 21,* 378-390.

Lakshmi N. (2007). Performance of the Indian mutual fund industry: A study with special reference to growth scheme, (Unpublished Doctoral Thesis). *Pondicherry University,* India.

Lohana P. M. (2014). Growth of mutual funds in India.*Acme International journal of multidisciplinary research, 2*(4), 25-30.

Mahmud M. & Mirza N. (2011). An evaluation of mutual fund performance in an economy: The case of Pakistan. *The Lahore journal of economics, 16,* 301-316.

Mishra B. & Rahman M. (2002), Measuring mutual fund performance using lower partial moment, *Global Business Trends,* Contemporary Readings. pp. 1-17

Munro J. & Liu B. (2009). State of the Investment Management Industry in Asia Pacific, *KPMG International report,* Retrieved from https://www.kpmg.com /CN/en/.../Documents/inv-mgt-aspac-O-0804.pdf

Narayanasamy R. & Rathnamani V. (2013).Performance Evaluation of equity mutual funds (on selected equity large cap funds). *International Journal of Business and Management Invention, 2*(4), 18-24

Nazir S. M. & Nawaj M. M. (2010).The determinants of mutual fund growth in Pakistan. *International Research Journal of Finance and Economics,54,* 75-84.

Nimalathasan B. & Gandhi R. K. (2012).Mutual fund financial performance analysis-A comparative study on equity scheme and equity mid cap schemes. *EXCEL International Journal of Multidisciplinary Management Studies, 2*(3), 91-106.

Noulas G. Athanasios et al. (2005). Performance of mutual funds. *Managerial Finance. 31*(2), 101-112.

Panwar S. & Madhumathi R. M. (2006). Characteristics and performance evaluation of selected mutual funds in India. Institute of capital Market 9th Capital market Conference paper, *Social science Research network (SSRN),* Retrieved from http://ssrn.com/abstract=876402

Parmar T. C. (2010). An empirical investigation on performance of mutual fund industry in India, (Unpublished Doctoral Thesis). *Saurashtra University*, Rajkot.

Pattanaik B. & Arvind M. S. (2009).Asset under management for various kinds of funds, (Unpublished Doctoral Thesis). *SP Jain Centre of management*, Singapore.

Prajapati K. P. & Patel M. K. (2012).Comparative study on performance evaluation of mutual fund scheme of Indian companies. *Journal of Arts, Science & commerce, 3*(3), 47-59

Prince V. & Bacon L. (2010). Analyzing mutual fund performance against establish performance benchmarks: A test of market efficiency. *Research in Business and Economics Journal, 1,* 1-15.

Rahman A.B.M. & Barua S. (2012). Mutual fund performance: An analysis of monthly return of an emerging market. *Research Journal of Finance and Accounting, 3*(4), 34-46.

Ramesh B. & Dhume P. S. (2014). Market timing ability of fund managers – Indian Experience, *The Indian Journal of Commerce, 67* (1), 1-15

Rao D. N. (2006). Investment styles and performance of equity mutual funds in India. *Social Science Research Network (SSRN)*, retrieved from http://ssrn.com/ abstract=922595

Rao N. S. & Ravindram M. (2002).Performance Evaluation of Indian mutual funds. *Proceedings of 15th Australasian Finance and Banking Conference held in Sydney (Australia) on 16-18 December 2002.*

Reddy S. R. et al. (2011). An empirical study on the pre and post- purchase informational needs of mutual fund investor. *Global journal of finance and management, 3*(1), 57-68.

Redman A. & Gullett Nell S. (2007).Impact of fund, management and market characteristics on bond mutual fund performance. *Journal of Asset Management,7*(6), 429-442.

Renneboog L.D.R. et al. (2007). The price of the ethics: Evidence from socially responsible mutual funds. *Centre discussion paper, Tilburg University, 29*, 1-47.

Roy S. (2014). The conditional performance of Indian mutual fund managers: A new look. *Amity Business Review, 15*(1), 142-167

Saez J.C. (2009). Non- simultaneously Market Timing in Mutual funds. *Journal of Applied Science, 9*(9), 1776-1780.

Sarish and Ajay J. (2012). Analysis regarding Mutual funds awareness and opinion.*VSRD International Journal of business & Management research,2*(1), 1-7.

Sarita B. & Rani M. (2012). A comparative analysis of mutual fund schemes in India. *International Journal of Marketing, Financial Services & Management Research, 1*(7), 67-79.

Satyasekhar G.V. (2011). An appraisal of modeling dimension for performance appraisal of global mutual funds. *International Journal of Research in Commerce and management, 2*(1), 71-80.

Saxton J. (2002). The mutual fund industry: An overview and analysis. *Joint Economic Committee Report. USA.*

Sharpe, W.F. (1966). Mutual Fund Performance. *Journal of Business, 39,* 119-138.

Sheikh M. J. & Noreen U. (2012). Validity of efficient market hypothesis: Evidence from UK mutual funds. *African Journal of Business Management, 6*(2), 514-520.

Shojai S. & Preece R. (2001).The future of U.S. Asset Management industry. *Journal of Finance Transformation, 1*, 72-79.

Shojai S. et al. (2001). The London Asset Management market. *Journal of finance transformation, 2*, 93-105.

Shojai S. et al. (2010). Economic Hubris- The case study of Equity Asset Management. *Journal of financial transformation, 29*, 9-16.

Shukla R. & Singh S. (1997). Performance evaluation of global equity mutual funds: Evidence from 1988-95. *Global Financial Journal, 8*(2), 279-293.

Skrinjaric T. (2013). Market timing ability of mutual funds with tests applied on several Croatian funds. *Croatian Operational Research Review, 4*, 176-186

Smith D. (2008). Asian Asset Management companies in retrospect. *Asia Focus, Country Analysis*, Unit of Federal Bank of San Francisco. Retrieved from http://ideas.repec.org/a/fip/fedfaf/y2008isepx1.html

Somashekar T. S. (2008). Performance and regulation of mutual funds in India: An economic analysis, (Unpublished Doctoral Thesis). *Institute of Social and Economic Change,*, India.

Sondhi H. J. & Jain P. K. (2006). Are equity investments well- timed? A study of timing parameters of equity mutual funds in India. *Journal of advances in management research, 3*(1), 17-25.

Soongswang A. & Sanohdontree Y. (2011a). Open ended equity mutual funds, *International Journal of Business and Social Science*, *2*(1), 127-136.

Soongswang A. & Sanohdontree Y. (2011b). Equity Mutual Fund: Performance, Persistence and Fund Rankings. *Journal of Knowledge Management, Economics and Information Technology,6*, 1-27.

Sorros N. John. (2003). Return and Risk analysis: A case study in equity mutual fund operating in the Greek financial market. *Managerial Finance,29*(9), 21-28.

Soumya D. G. & Benerjee A. (2009). Downside risk analysis of Indian equity mutual funds: A value at risk approach. *International research Journal of finance and economics*, 23, 216-230.

Soumya D. G. (2008). Performance Evaluation of Equity mutual funds in India; An empirical exploration, (Unpublished Doctoral Thesis). *IIM Calcutta*. India.

Soumya D. G. et al. (2007). Performance of Indian equity mutual funds vis a vis their style benchmarks: An empirical exploration. *Journal of applied Finance, ICFAI.*

Subrahmanyam N. (2009). Mutual funds and banking: India and global experience. (Report) *Indian Institute of Banking & Finance*. Retrieved from http://www.iibf.org.in/documents/reseach-report/Report-17.pdf

Sumalatha B.S. (2007). State of competition among the mutual funds in India: An explanatory analysis. (Unpublished Dissertation submitted for M. Phil.), *Jawaharlal Nehru University*. India.

Suppa A. T. (2010). Mutual Fund performance in emerging markets: The case of Thailand. (Unpublished Doctoral thesis), *University of Birmingham*, U.K.

Treynor J. &Mazuy K. (1966). Can mutual funds outguess the market? *Harvard Business Review*, *44*, 131–136.

Treynor, J. L. (1965). How to rate management of investment funds? *Harvard Business Review. 43*(1), 63-75.

Tripathi N. P. (2005). An empirical evaluation of market timing abilities of Indian fund managers on equity linked saving scheme. *Delhi Business Review,6*(2), 20-27.

Tripathi N. P. (2006). Market timing abilities and mutual fund performance- an empirical investigation into equity linked saving schemes. *Vilakshan, XIMB Journal of Management*, 127-138.

Urakabe A. (2010). Growth of Asset Management business in Asia. *Lakyana (special edition) Nomura Research Institute Ltd, 85*

Vasantha S. V. et al. (2013). Evaluating the performance of some selected open ended equity diversified mutual fund in Indian mutual fund industry. *International Journal of Innovative Research in Science, Engineering and Technology, 2*(9), 4735-4744.

Villadsen M. (2011). Performance Evaluation of 60 Danish mutual funds. (Unpublished doctoral thesis), *Aarhus University*, Denmark.

Walter I. &Sisli E. (2007). The Asset Management Industry in Asia: Dynamics and growth, structure and performance. *Financial markets, institutions and instruments,6* (1).

Walter I. (1999). The global asset management industry: Competitive, Structure and Performance. *Financial Markets, Institutions and Instruments*, *8*(1), 1-78.

Wermers R. (2000). Mutual fund performance: An empirical decomposition into stock-picking talent, style, transaction costs and expenses. *The Journal of finance, 4*(4), 1655-1695.

Chapter-3

INDIAN CAPITAL MARKET – CONCEPTUAL FRAMEWORK

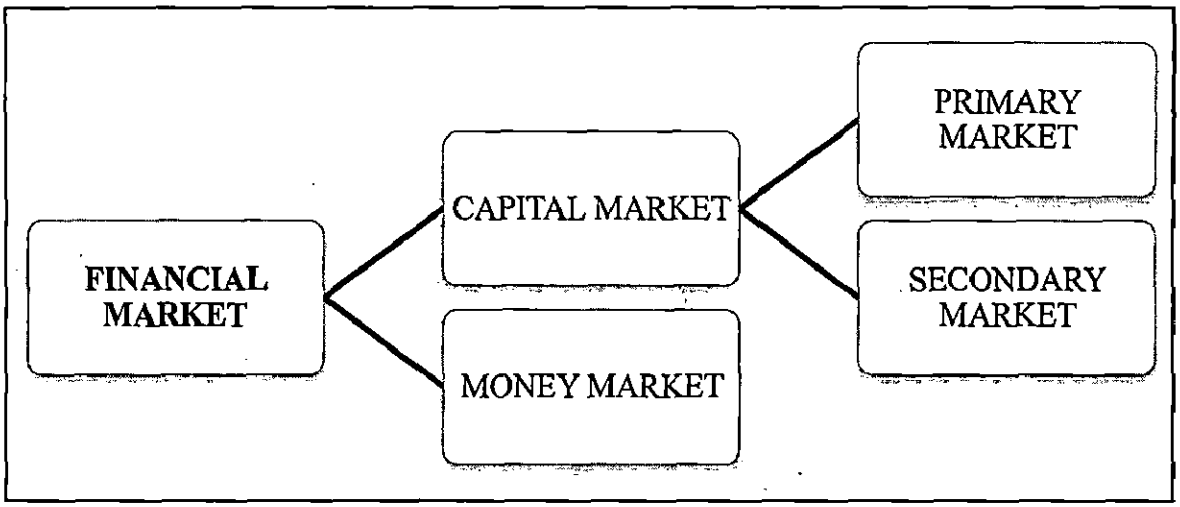
3.1 INTRODUCTION

The capital market is the barometer of any country's economy and provides a mechanism for capital formation. Across the world there was a transformation in the financial intermediation from a credit based financial system to a capital market based system which was partly due to a shift in financial policies from financial repression (credit controls and other modes of primary sector promotion) to financial liberalization. This led to an increasing significance of capital market in the allocation of financial resources.

The capital market is a place where the suppliers and users of capital meet to share one another's views, and where a balance is sought to be achieved among diverse market participants. The securities decouple individual acts of saving and investment over time, space and entities and thus allow savings to occur without concomitant investment. Moreover, yield- bearing securities makes present consumption more expensive relative to future consumption, inducing people to save. The composition of savings changes with less of it being held in the form of idle money or unproductive assets, primarily because more divisible and liquid assets are available. The capital market acts as a brake on channelling savings to low- yielding enterprises and impels enterprises to focus on performance. It continuously monitors performance through movements of share prices in the market and the threats of takeover. This improves efficiency of resource utilisation and thereby significantly increases returns on investment. As a result, savers and investors are not constrained by their individual abilities, but facilitated by the economy's capability to invest and save, which inevitably enhances savings and investment in the economy. Thus, the capital market converts a given stock of investible resources into a larger flow of goods and services and augments economic growth. The reason for development in capital market was an increasing uncertainty caused due to liberalization and standardization of the prudential requirements of the banking sector for global integration of the Indian financial system. Further, rise in their non-performing assets led to a decrease in credit from banks to the commercial sector. Liberalization and opening of the gates led to an expansion of three broad channels of financing the private sector namely, Domestic capital market, International capital market (American depository receipts and Global depository receipts) and foreign direct investment. The global financial environment is undergoing unremitting transformation. Geographical boundaries have

disappeared. The days of insulated and isolated financial markets are history. The success of any capital market largely depends on its ability to align itself with the global order. Capital Market in India are characterised by its vibrant equity and debt markets assuming a fast paced growth. With domestic savings and investments pegged at a higher rate every year, capital market strives to channelize the maximum savings into the financial system, thereby increasing the depth of the market. There arises a need to create a suitable mechanism aided by appropriate instruments which will tap savings right from the grass root level, mobilising them into the capital market. To realize national aspirations and keep pace with the changing times, the capital markets in India have gone through various stages of liberalization, bringing about fundamental and structural changes in the market design and operation, resulting in broader investment choices. The opening up of the economy for investment and trade, the dismantling of administered interest and exchange rates regimes and setting up of sound regulatory institutions have integrated the Indian Capital market with global market.

Figure-3.1 Components of Financial Market



Source: AMFI Website.

The capital market, like the money market plays a significant role in the national economy. A developed, dynamic and vibrant capital market can contribute significantly in the speedy economic growth and development. It mobilizes funds from people for further investments in the productive channels of an economy, activating idle monetary resources and putting them in proper investments. Capital market also helps in capital formation. Capital formation is net addition to the existing stock of capital in the economy. Through mobilization of ideal resources it generates savings; the mobilized savings are made available to various segments such as

agriculture, industry, etc. This helps in increasing capital formation. It provides an investment avenue for people who wish to invest resources for a longer period of time. It provides suitable interest rate return to investors. Instruments such as bonds, equities, units of mutual funds, insurance policies, etc. definitely provide diverse investment avenues for the public. The capital market enhances production and productivity in the national economy. As it makes funds available for long periods of time, the financial requirements of business houses are met by the capital market. It helps in increasing production and productivity in the economy by generation of employment and development of infrastructure.

The lack of an advanced and vibrant capital market can lead to under utilization of financial resources. A developed capital market provides access to foreign capital for domestic industry and definitely plays a constructive role in the overall development of an economy.

Capital markets consist mainly of Stock (equity) and Debt markets. It provides an avenue for raising the long-term financing needs of business through equity and long term debt by attracting investors with a long term investment horizon. In primary markets, businesses and sovereigns issue financial instruments representing claims against their future cash flows and use these to tap large regional and global pools of savings in order to finance themselves. Secondary Market on the other hand, refers to a market where securities are traded after being initially offered to the public in the primary market and listed on the Stock Exchange. Majority of the trading is done in the secondary market. Secondary market comprises of equity markets and the debt markets. For the general investor, the secondary market provides an efficient platform for trading of his securities. For the management of the company, Secondary equity markets serve as a monitoring and control conduit by facilitating value-enhancing control activities, enabling implementation of incentive-based management contracts, and aggregating information (via price discovery) that guides management decisions.

3.2 EMERGENCE OF WORLD CAPITAL MARKET

Prior to the nineteenth century, the geographical scope for international finance was relatively limited. Italian banks of the Renaissance financed trade and Government around Mediterranean As trade expanded within Europe, financial innovations spread farther north through the letters of credit developed by Champagne Fairs and the new

banks in North Sea ports such as Bruges and Antwerp. Later, London and Amsterdam became the key centres, and their currencies and financial instruments were the principal instrument of market. As the industrial revolution gathered force and radiated out from Great Britain, the importance of international financial markets became more apparent in both the public and private spheres In due course, the scope for such trades extended to other centres resulting in developing markets and institutions capable of supporting international financial transactions. In eastern United States, a broad range of centres including Boston, Philadelphia, and Baltimore gave way to what became the dominant centre of national and international finance i.e. New York. By the late nineteenth century, both France and Germany had developed sophisticated and expanding international markets, well integrated into the networks of global finance. Elsewhere in Europe, similar markets had started developing and eventually financial trading spread to places as far as Melbourne and Buenos Aires. With the world started adopting the gold standard as a monetary system, and with technological developments in shipping e.g., steamships' replacing sail and communications (the telegraph, transoceanic cables), the first global marketplace in capital, as well as in goods and labour, took shape. Within finance, the technological and institutional developments were tae place such as the use of modern communications to transmit prices and the development of a very broad array of private debt and equity instruments. By 1900, the use of forwards future and cash derivative securities permeated major economic centres around the world, stretching from Europe, east and west, north and south, to the U.S.A., Asia, and Africa. The key currencies and instruments were known everywhere, and formed the basis for an expanding world commercial network. Bills of exchange, bond finance, equity issues, foreign direct investments, and many other types of transactions were by then quite common among the core countries and also among a growing number of nations at the periphery. Aside from haute finance, more and more day-to-day activities came into the orbit of finance via the growth and development of banking system in many countries.

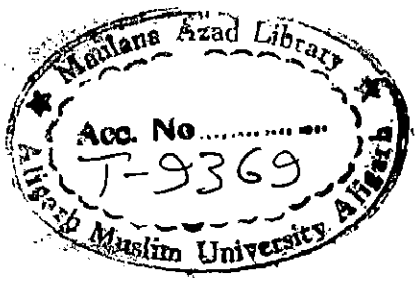


Table- 3.1 International Comparison

Country	Exchange	Listed Companies	Market Capitalisation	Value of Share Traded
USA	NYSE	2385	18306138	1372922
India	BSE	5336	1241625	9646.063
Hong Kong	Hong Kong Exchanges	1666	2973381	141747.5
Japan	Japan Exchange Group - Tokyo	1814	4316490	455146.6
China	Shanghai SE	959	2376030	301555.7
Switzerland	SIX Swiss Exchange	65	1611176	72928.5
WFE Total		**43698**	**61226526**	**5069304**

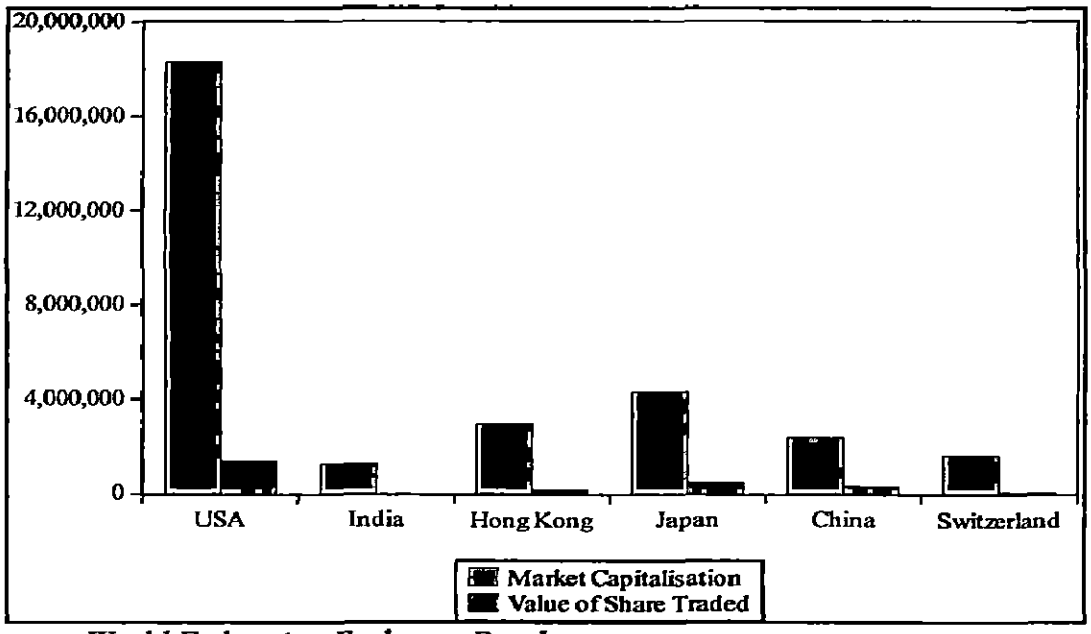
Source: World Federation Exchange *(WFE) Database.*
(Market Capitalization and Value of Share Traded are in US $ Million, at the end of March 2014).

Table 3.1 shows the international comparison of the selected countries in terms of number of listed companies, market capitalization, and value of share traded.

Listed Companies

Listing in a stock exchange refers to the admission of the securities of the company for trade dealings in a recognized stock exchange. The securities may be of any public limited company, Central or State Government, quasi-governmental and other financial institutions, corporations, municipalities, etc. Securities of any company are listed in a stock exchange to provide liquidity to the securities, to mobilize savings and to protect the interests of the investors. The listed companies in the world were 43698 in which 5336 companies are listed in India accounted for 12.11 per cent of the total listed companies at the end of March 2014.

Graph - 3.1 Market Capitalizations and Value of Share Traded- Selected Countries



Source: World Federation Exchange Database.
(Figure at the end of March 2014)

Market Capitalization

Market capitalization of a country (or market cap) is the total value of the issued shares of all publicly traded company in a country. It is equal to the market price share multiply with the number of shares outstanding. The market capitalization of all the listed companies taken together across all the markets stood at US $ 61.2 trillion at the end of 2013-14. The share of the US in worldwide market capitalization was 29.9 per cent while the market capitalization of Indian companies accounted for 2.02 per cent of the total market capitalization at the end of 2013-14.

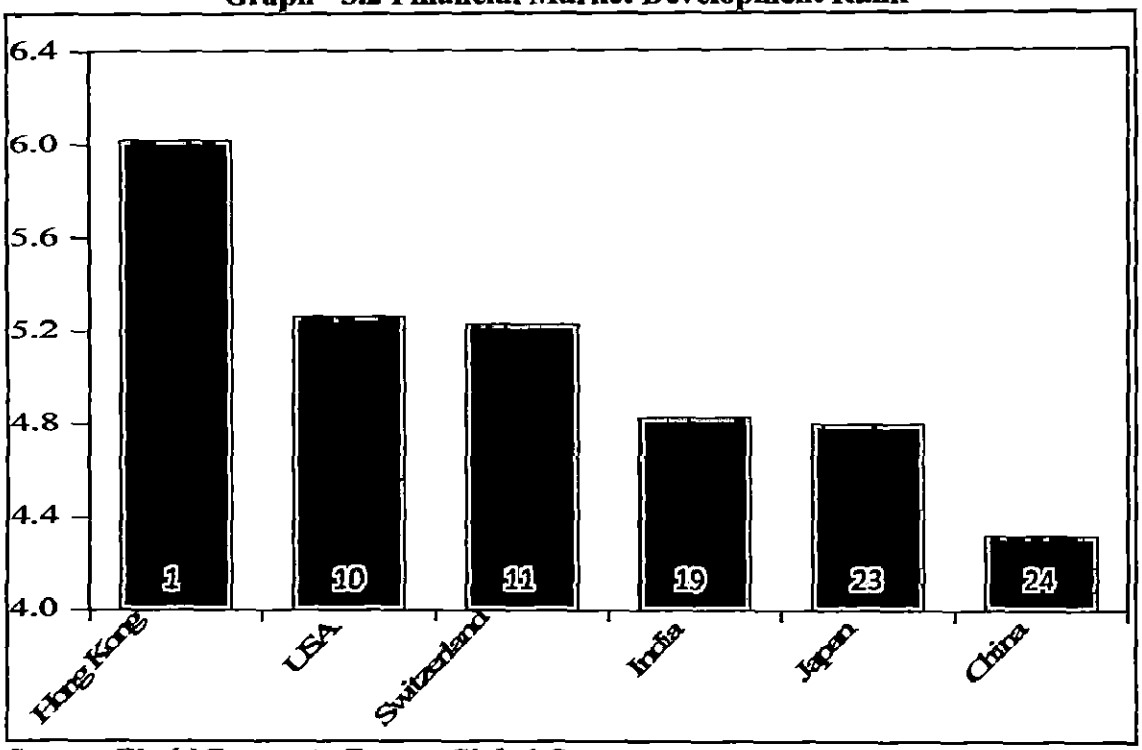
Value of Share Traded

The turnover value is the total number of shares traded multiplied by their respective matching prices. The turnover of USA alone accounted for 27.07 per cent of the worldwide turnover at the end of March 2014. Despite having a large number of companies listed on its exchanges, share of India was only 0.19 per cent of the total world turnover.

Financial Market Development

World Economic Forum (WEF), an independent non-profit foundation based in Geneva, Switzerland measure the rank given to various countries in terms of financial market development launched by the Global Competitiveness Report of the World Economic Forum (WEF).

Graph - 3.2 Financial Market Development Rank



Source: World Economic Forum, Global Competitiveness Report 2013-14

Graph 3.2 shows the ranking of major countries in terms of financial market development. In this ranking India took the 19th position, ranking among the 148 countries, getting 4.83 points on 7 point-scale. In major countries this report clearly shows that India was overtaken by Hong Kong (rank 1), USA (rank 10), and Switzerland (rank 11). Japan (rank 23) and China (rank 54) are trying to narrow the gap with India.

3.3 HISTORY OF INDIAN CAPITAL MARKET

Indian Capital market has witnessed a paradigm shift at par with the advanced markets of the world in the last 10 years or so. Business process, functionality, monitoring, regulating mechanisms, hardware, software etc., are all revamped to compete with the global leaders. The current position of Indian capital market has a long history about its past. The history of the capital market in India dates back to the eighteenth century when East India Company's securities were traded in the country. In 1850s, the trading was limited to a dozen brokers and their trading place was under a banyan tree in front of the Town Hall in Bombay. The location of trading changed many times, as the number of brokers constantly increased. The group eventually moved to Dalal Street in 1874 and in 1875 became an official organization known as 'The Native Share & Stock Brokers Association'. In 1895, this association acquired a

premise in the Dalal Street and it was inaugurated in 1899. Thus, the Stock exchange at Bombay was consolidated and the orderly growth of the capital market in India began. The Bombay stock exchange got recognition in May 1927 under the Bombay Securities Contracts Control Act, 1925. The constitution of India came into being on 26th January, 1950. The constitution put the stock exchanges and the forward markets under the exclusive authority of the Government of India. In 1956, the BSE became the first stock exchange to be recognized by the Indian Government under the Securities Contracts (Regulation) Act. In 1964, UTI start mutual fund operation and participated in Indian capital market. The 1980s witnessed an explosive growth of the securities market in India, with millions of investors suddenly discovering lucrative opportunities. Many investors jumped into the stock markets for the first time. The government's liberalization process initiated during the mid-1980s, spurred this growth. The Bombay Stock Exchange developed the BSE Sensex in 1986, giving the BSE a means to measure overall performance of the exchange. The 1990s will go down as the most important decade in the history of the capital market of India. The Capital Issues (Control) Act, 1947 was repealed in May 1992. The decade was characterized by a new industrial policy, emergence of SEBI as a regulator of capital market, advent of foreign institutional investors, euro-issues, free pricing, new trading practices, new stock exchanges, entry of new players such as private sector mutual funds and private sector banks, and primary market boom and bust. The 1991-92 securities scam revealed the inadequacies of and inefficiencies in the financial system. It was the scam, which prompted a reform of the equity market. The Indian stock market witnessed a sea change in terms of technology and market prices. Technology brought radical changes in the trading mechanism. The Bombay Stock Exchange (BSE) was subject to nationwide competition by two new stock exchanges – the National Stock Exchange (NSE), set up in 1994, and Over the Counter Exchange of India (OTCEI), set up in 1992. The National Securities Clearing Corporation Limited (NSCCL) and National Securities Depository Limited (NSDL) were set up in April 1995 and November1996 respectively form improved clearing and settlement and dematerialized trading. The Securities Contracts (Regulation) Act, 1956 was amended in 1995-96 for introduction of options trading. Moreover, rolling settlement was introduced in January 1998 for the dematerialized segment of all companies. With automation and geographical spread, stock market participation increased. In 1996, the National Stock Exchange of India launched S&P CNX Nifty and CNX Junior

Indices that make up 100 most liquid stocks in India. CNX Nifty is a diversified index of 50 stocks from 25 different economy sectors. The Indices are owned and managed by India Index Services and Products Ltd (IISL) that has a consulting and licensing agreement with Standard & Poor's. In 1998, the National Stock Exchange of India launched its web-site and was the first exchange in India that started trading stock on the Internet in 2000. The NSE has also proved its leadership in the Indian financial market by gaining many awards such as 'Best IT Usage Award' by Computer Society in India (in 1996 and 1997) and CHIP Web Award by CHIP magazine (1999). In 2000 the BSE used the sensitive index, i.e., Sensex to open its derivatives market, trading Sensex futures contracts. The development of Sensex options along with equity derivatives followed in 2001 and 2002, expanding the BSE's trading platform. The introduction of rolling settlement system in all scrips and electronic fund transfer in 2003 reduced the settlement cycle to T+2. Indian capital market in 2007-08, thus, features a developed regulatory environment, a modern market infrastructure, a steadily increasing market capitalization and liquidity, better allocation and mobilization of resources, a rapidly developing derivatives market, a robust mutual fund industry, and increased issuer transparency. However, in the last quarter of 2008 and up to the first quarter of 2009, the capital market went through a phase of downsizing due to the direct impact of global financial crisis that originated from the USA sub-prime mortgage market. Indian capital market has seen its worst time with the global financial crisis. Similar decline has also been noticed for S&P CNX Nifty index. Despite the scale down of popular capital market indices up to the first quarter of 2009, Indian stock markets now provide the evidence of strong resistance to global financial contagion. This infers the strong investor confidence and well risks diversification in Indian capital market.

3.4 REGULATORY EFFICACY

The capital market in India was underdeveloped, opaque, dominated by a handful of players, and concentrated in a few cities. Manipulation and unfair practices were perceived to be widespread and rampant, prompting an overseas researcher to describe it as a "snake pit". The transformation of the Indian securities markets was initiated with the establishment of the Securities and Exchange Board of India (SEBI) in 1989, initially as informal body and in 1992 as a statutory autonomous regulator

with the twin objectives of protecting the interests of the investors and developing and regulating the securities markets over a period of time. SEBI has been empowered to investigate, examine, visit company premises, summon records and persons and enquire and impose penalties commensurate with misconduct. The first and foremost challenge for the fledgling regulator was to create a regulatory and supervisory framework for the market, a job that proved formidable, because vested interests resisted every new step. However, with the designing and notification of 32 guidelines (amended many times over), during a decade and half of its existence, the apparatus steadily evolved and has come to grip with the situation. SEBI has instituted a consultative process of framing regulations. The comments are compiled and considered before finalizing regulations. Even the draft regulations are put on the website before notification for legal pundits to comment if the law framed is in consonance with the spirit of initiatives. This has a profound impact not only in terms of receiving valuable input and building public opinion before framing regulations/guidelines but also in improving the quality, acceptability and implementibility. SEBI has formed a number of committees comprising of eminent experts and market practitioners to support it in the design of reforms for different aspects of the markets. The regulator posts all its orders, including those delivered on appeals against its orders, on its website. These measures work as a self- disciplining mechanism within SEBI and provide full transparency to its functioning. The main legislations governing the capital market are-

At present, the five main Acts governing the securities markets are as follows-

Companies Act, 1956

It deals with the issue, allotment, and transfer of securities, as well as various aspects relating to company management. It provides the standard of disclosure in public issues of capital, particularly in the fields of company management and projects, information about other listed companies under the same management, and the management's perception of risk factors. It also regulates underwriting, the use of premium and discounts on issues, rights, and bonus issues, the payment of interest and dividends, the supply of annual reports, and other information.

Securities and Exchange Board of India (SEBI) Act, 1992

The SEBI Act, 1992 was enacted to empower SEBI with statutory powers for (a) protecting the interests of investors in securities, (b) promoting the development of the securities market, and (c) regulating the securities market. Its regulatory

jurisdiction extends over corporate in the issuance of capital and transfer of securities, in addition to all intermediaries and persons associated with the securities market. It can conduct enquiries, audits, and inspection of all concerned, and adjudicate offences under the Act. It has the powers to register and regulate all market intermediaries, as well as to penalize them in case of violations of the provisions of the Act, Rules, and Regulations made there under. SEBI has full autonomy and the authority to regulate and develop an orderly securities market.

Securities Contracts (Regulation) Act, 1956

This Act provides for the direct and indirect control of virtually all aspects of securities trading and the running of stock exchanges, and aims to prevent undesirable transactions in securities. It gives the Central Government regulatory jurisdiction over stock exchanges through a process of recognition and continued supervision, contracts in securities, and the listing of securities on the stock exchanges. As a condition of recognition, a stock exchange complies with the conditions prescribed by the Central Government. Organized trading activity in securities takes place on a specified recognized stock exchange. The stock exchanges determine their own listing regulations, which have to conform to the minimum listing criteria set out in the Rules.

Depositories Act, 1996

The Depositories Act, 1996 provides for the establishment of depositories in securities with the objective of ensuring free transferability of securities with speed, accuracy, and security by making securities of public limited companies freely transferable, subject to certain exceptions, dematerializing the securities in the depository mode and providing for the maintenance of ownership records in a book entry form. In order to streamline the settlement process, the Act envisages the transfer of ownership of securities electronically by book entry, without making the securities move from person to person. The Act has made the securities of all public limited companies freely transferable, restricting the company's right to use discretion in effecting the transfer of securities, and the transfer deed and other procedural requirements under the Companies Act have been dispensed with.

Prevention of Money Laundering Act, 2002

The primary objective of this Act is to prevent money laundering, and to allow the confiscation of property derived from or involved in money laundering. According to the definition of "money laundering," anyone who acquires, owns, possess, or

transfers any proceeds of crime, or knowingly enters into any transaction that is related to the proceeds of crime either directly or indirectly, or conceals or aids in the concealment of the proceeds or gains of crime within India or outside India commits the offence of money laundering. Besides prescribing the punishment for this offence, the Act provides other measures for the prevention of money laundering. The Act also casts an obligation on the intermediaries, the banking companies, etc. to furnish information of such prescribed transactions to the Financial Intelligence Unit-India, to appoint a principal officer, to maintain certain records, etc.

3.5 RECENT INITIATIVES IN CAPITAL MARKET

The main initiatives take place in the Indian capital market are here under:

- Development of Corporate Bond Market.
- Dedicated trading platforms for small and medium scale enterprises.
- Reducing transaction cost in Securities markets.
- QFI access to Indian Equity Markets, corporate bonds and mutual fund debt schemes.
- Liberalization in ECBs: Permitting External Commercial Borrowings (ECB) to part finance Rupee debt of existing power projects.
- Financial Stability and Development Council (FSDC).
- Financial Action Task Force (FATF).
- Permitting two-way fungibility in Indian Depository Receipts.
- Reduction in the rate of long-term capital gains tax in the case of other non-resident investors, including Private Equity from 20 per cent to 10 per cent on the same lines as applicable to FIIs.
- Providing the levy of Securities Transaction Tax (STT) at the rate of 0.2 per cent on sale of unlisted securities in the course of IPO.
- Tax exemption to "Angel" investors investing in start-up companies.
- Extending the lower rate of withholding tax to funds raised through long term infrastructure bonds in addition to borrowing under a loan.
- Agreement.
- Removal of Restriction on Venture Capital Funds to invest only in nine specified sectors.
- Financial Sector Legislative Reforms Commission (FSLRC).

- Rajiv Gandhi Equity Saving Scheme.
- Mandatory offer of electronic voting facility.
- Income tax exemption to the Beneficial Owners Protection Fund (BOPF) set up by the Depositories.

3.6 FINANCIAL INSTITUTIONS & INTERMEDIARIES IN CAPITAL MARKET

Capital market activities create the need for different kinds of institutions. Important intermediaries are:

Stock Exchange

Stock Exchanges are an organized marketplace, either corporation or mutual organization, where members of the organization gather to trade company stocks or other securities. The members may act either as agents for their customers, or as principals for their own accounts. Stock exchanges also facilitates for the issue and redemption of securities and other financial instruments including the payment of income and dividends. The record keeping is central but trade is linked to such physical place because modern markets are computerized. The trade on an exchange is only by members and stock broker do have a seat on the exchange.

The National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) is India's premier stock exchange. It offers a platform for secondary market trades. NSE provides trading in four different segments - Wholesale Debt Market, Capital Market, Futures and Options and Currency Derivatives Segment while the BSE provides trading in equity, derivative and currency derivative segment.

Clearing Corporation

Once trades are executed, their clearing and settlement are handled by the clearing corporation which may operate as an independent entity or a subsidiary of the exchange. The National Securities Clearing Corporation Ltd. (NSCCL), a wholly owned subsidiary of NSE, is responsible for clearing and settlement of trades executed at the NSE. As part of its role, NSCCL provides financial guarantee for all the settlements. This takes care of any counterparty risk. Further, NSCCL helps in managing the risk in the market through an effective margining system.

CRISIL has assigned its highest corporate credit rating of 'AAA' to the National Securities Clearing Corporation Ltd (NSCCL). 'AAA' rating indicates highest degree

of strength with regard to honouring debt obligations. The rating also factors in NSCCL's rigorous risk management controls and adequate settlement guarantee cover.

Underwriters

The success of a public issue many a times depends on the prevailing sentiment in the markets. Companies and their merchant bankers prefer the certainty that the expected funds will be mobilized. This certainty is brought in by appointing Underwriters. Every underwriter commits to bring in an agreed amount as part of the issue. Thus, if the targeted money is not mobilized in the issue, the underwriters bring in the funds to bail out the issue.

Registrar & Transfer Agents (RTA)

The RTA keeps a record of the share-holders and their share-holding in the company. In a public issue, RTA is responsible for allotting shares to applicants on the basis of allotment formula that is finalized between the company, its merchant banker and the stock exchange. The RTA also assists companies in executing various corporate actions such as dividend payments, rights issues (issue of new shares at an agreed price to existing investors) and bonus issues (issue of new shares, free, to existing investors).

Depository

Although a company issues securities as part of its resource mobilization exercise, the investor is rarely given a physical certificate. It is normal practice for investors to have a depository account, into which their investments are credited; when they sell any part of their portfolio, the corresponding investments are reduced from their depository account. Thus, a depository account serves the same purpose for securities, as a bank account serves for money. NSE, along with some other institutions, promoted India's first depository, National Securities Depository Ltd (NSDL). Central Depository Services (India) Ltd is the other depository that operates in the country. The depositories have made instantaneous electronic transfer of securities possible. Demat (Dematerialised) settlement has eliminated the bad deliveries and associated problems which existed in the physical settlement of securities transactions in the country. To prevent physical certificates from sneaking into circulation, it has been made mandatory for all newly issued securities to be compulsorily traded in dematerialised form. Now, the public listed companies making IPO of any security for Rs.10 crore or more have to make the IPO only in dematerialised form.

Foreign Institutional Investors (FII)

Institutional investors are organizations who invest their own funds or pool sums of money from investors and invest those sums in investible assets such as equity, debt, government securities, commodities etc. FIIs are institutional investors from or registered in a country outside of the one in which they are currently investing. FIIs invest their proprietary (own) funds or pool money and invest on behalf of "broad based" funds, corporate, foreign individuals etc. FIIs are entitled to operate as such, based on their registration with SEBI and the RBI. Detailed eligibility and operating guidelines exist for FIIs (can be found on SEBI and RBI websites). Investments by FIIs enjoy full capital account convertibility. They can invest in a company under portfolio investment route up to 24 per cent of the paid up capital of the company. This can be increased up to the sectoral cap / statutory ceiling, as applicable to the Indian companies concerned, by passing a resolution of its Board of Directors followed by a special resolution to that effect by the company at its general body. FIIs are regulated by both SEBI and RBI.

Insurance Companies

Life insurance policies that are taken to cover the lives of individuals are typically of long tenors. Often they extend over several decades. Insurance companies invest the funds available with them in the primary and secondary markets. Life insurance companies thus become a source of long term funds in the capital market. Insurance companies are regulated by Insurance Regulatory & Development Authority (IRDA). For their operations in the capital market, they also need to comply with the capital market regulations of SEBI.

3.7 CAPITAL MARKET INSTRUMENTS

The capital market is characterized by a large variety of financial instruments i.e. equity and preference shares, Fully Convertible Debentures (FCDs), Non-Convertible Debentures (NCDs) and Partly Convertible Debentures (PCDs) currently dominate the capital market, however new instruments are being introduced such as debentures bundled with warrants, participating preference shares, zero-coupon bonds, secured premium notes, etc.

Secured Premium Notes

SPN is a secured debenture redeemable at premium issued along with a detachable warrant, redeemable after a notice period, say four to seven years. The warrants attached to SPN gives the holder the right to apply and get allotted equity shares; provided the SPN is fully paid. There is a lock-in period for SPN during which no interest will be paid for an invested amount. The SPN holder has an option to sell back the SPN to the company at par value after the lock in period. If the holder exercises this option, no interest/ premium will be paid on redemption. In case the SPN holder holds it further, the holder will be repaid the principal amount along with the additional amount of interest or premium on redemption in instalments as decided by the company. The conversion of detachable warrants into equity shares will have to be done within the time limit notified by the company. Ex-TISCO issued warrants for the first time in India in the year 1992 to raise 1212 crore.

Deep Discount Bonds

Bond that sells at a significant discount from par value and has no coupon rate or lower coupon rate than the prevailing rates of fixed-income securities with a similar risk profile. They are designed to meet the long term funds requirements of the issuer and investors who are not looking for immediate return and can be sold with a long maturity of 25-30 years at a deep discount on the face value of debentures. Ex-IDBI deep discount bonds for Rs 1 lakh repayable after 25 years were sold at a discount price of Rs. 2,700.

Equity Shares with Detachable Warrants

A warrant is a security issued by company entitling the holder to buy a given number of shares of stock at a stipulated price during a specified period. These warrants are separately registered with the stock exchanges and traded separately. Warrants are frequently attached to bonds or preferred stock as a sweetener, allowing the issuer to pay lower interest rates or dividends. Ex-Essar Gujarat, Ranbaxy, Reliance issue this type of instrument.

Fully Convertible Debentures with Interest

This is a debt instrument that is fully converted over a specified period into equity shares. The conversion can be in one or several phases. When the instrument is a pure debt instrument, interest is paid to the investor. After conversion, interest payments cease on the portion that is converted. If project finance is raised through an FCD issue, the investor can earn interest even when the project is under implementation.

Once the project is operational, the investor can participate in the profits through share price appreciation and dividend payments.

EQUIPREF

They are fully convertible cumulative preference shares. This instrument is divided into two parts namely Part A & Part B. Part A is convertible into equity shares automatically compulsorily on date of allotment without any application by the allotted. Part B is redeemed at par or converted into equity after a lock in period at the option of the investor, at a price 30 per cent lower than the average market price.

Sweat Equity Shares

The phrase `sweat equity' refers to equity shares given to the company's employees on favourable terms, in recognition of their work. Sweat equity usually takes the form of giving options to employees to buy shares of the company, so they become part owners and participate in the profits, apart from earning salary. This gives a boost to the sentiments of employees and motivates them to work harder towards the goals of the company. The Companies Act defines `sweat equity shares' as equity shares issued by the company to employees or directors at a discount or for consideration other than cash for providing knowhow or making available rights in the nature of intellectual property rights or value additions, by whatever name called.

Tracking Stocks

A tracking stock is a security issued by a parent company to track the results of one of its subsidiaries or lines of business; without having claim on the assets of the division or the parent company. It is also known as designer stock. When a parent company issues a tracking stock, all revenues and expenses of the applicable division are separated from the parent company's financial statements and bound to the tracking stock. Oftentimes, this is done to separate a subsidiary's high-growth division from a larger parent company that is presenting losses. The parent company and its shareholders, however, still control the operations of the subsidiary.

Disaster Bonds

Disaster bonds are also known as Catastrophe or CAT Bonds, Disaster Bond is a high-yield debt instrument that is usually insurance linked and meant to raise money in case of a catastrophe. It has a special condition that states that if the issuer (Insurance or Reinsurance Company) suffers a loss from a particular pre-defined catastrophe, then the issuer's obligation to pay interest or repay the principal is either deferred or completely forgiven. Ex- Mexico sold $290 million in catastrophe bonds,

becoming the first country to use a World Bank program that passes the cost of natural disasters to investors. Goldman Sachs Group Inc. and Swiss Reinsurance Co. managed the bond sale, which will pay investors unless an earthquake or hurricane triggers a transfer of the funds to the Mexican government.

Mortgage Backed Securities (MBS)

MBS is a type of asset-backed security, basically a debt obligation that represents a claim on the cash flows from mortgage loans, most commonly on residential property. Mortgage backed securities represent claims and derive their ultimate values from the principal and payments on the loans in the pool. These payments can be further broken down into different classes of securities, depending on the riskiness of different mortgages.

Mutual Funds

Mutual Funds are vehicles to mobilise funds from investors, through various schemes. The funds are then invested in line with the scheme guidelines, for the benefit of investors. Mutual Funds in India are regulated by SEBI.

Global Depository Receipts (GDR) and American Depository Receipts (ADR)

A negotiable certificate held in the bank of one country (depository) representing a specific number of shares of a stock traded on an exchange of another country. GDR facilitate trade of shares, and are commonly used to invest in companies from developing or emerging markets. GDR prices are often close to values of related shares, but they are traded and settled independently of the underlying share. Listing on a foreign stock exchange requires compliance with the policies of those stock exchanges. Many times, the policies of the foreign exchanges are much more stringent than the policies of domestic stock exchange. However a company may get listed on these stock exchanges indirectly using ADRs and GDRs. If the depository receipt is traded in the United States of America (USA), it is called an American Depository Receipt or an ADR. If the depository receipt is traded in a country other than USA, it is called a Global Depository Receipt, or a GDR. But the ADRs and GDRs are an excellent means of investment for NRIs and foreign nationals wanting to invest in India. By buying these, they can invest directly in Indian companies without going through the hassle of understanding the rules and working of the Indian financial market – since ADRs and GDRs are traded like any other stock, NRIs and foreigners can buy these using their regular equity trading accounts.

Foreign Currency Convertible Bonds (FCCBs)

A convertible bond is a mix between a debt and equity instrument. It is a bond having regular coupon and principal payments, but these bonds also give the bondholder the option to convert the bond into stock. FCCB is issued in a currency different than the issuer's domestic currency. The investors receive the safety of guaranteed payments on the bond and are also able to take advantage of any large price appreciation in the company's stock. Due to the equity side of the bond, which adds value, the coupon payments on the bond are lower for the company, thereby reducing its debt-financing costs.

Venture Capital Funds & Private Equity Funds

Businesses need to reach a certain size, before they are in a position to mobilize funds from the public at large. Their resource requirements until then can be met through Venture Capital Funds and Private Equity Funds. The Venture Capital funds invest at a very early stage in a company, and are prepared to take the risk of the venture failing. Private Equity funds tend to invest at a later stage, after the business has demonstrated some progress in executing its business model. At times, the difference between these two categories of funds is lost in the market. Venture Capital Funds need to register with SEBI. Foreign venture capital investors are also regulated by Reserve Bank of India (RBI).

Derivatives

A derivative is a financial instrument whose characteristics and value depend upon the characteristics and value of some underlying asset typically commodity, bond, equity, currency, index, event etc. Advanced investors sometimes purchase or sell derivatives to manage the risk associated with the underlying security, to protect against fluctuations in value, or to profit from periods of inactivity or decline. Derivatives are often leveraged, such that a small movement in the underlying value can cause a large difference in the value of the derivative.

Participatory Notes

Participatory Notes is also referred to as 'P-Notes' Financial instruments used by investors or hedge funds that are not registered with the Securities and Exchange Board of India to invest in Indian securities. Indian-based brokerages buy India-based securities and then issue participatory notes to foreign investors. Any dividends or capital gains collected from the underlying securities go back to the investors. These are issued by FIIs to entities that want to invest in the Indian stock market but do not

want to register themselves with the SEBI. RBI, which had sought a ban on PNs, believes that it is tough to establish the beneficial ownership or the identity of ultimate investors.

Hedge Fund

Hedge fund is an investment fund open to a limited range of investors that undertakes a wider range of investment and trading activities in both domestic and international markets, and that, in general, pays a performance fee to its investment manager. Every hedge fund has its own investment strategy that determines the type of investments and the methods of investment it undertakes. Hedge funds, as a class, invest in a broad range of investments including shares, debt and commodities. As the name implies, hedge funds often seek to hedge some of the risks inherent in their investments using a variety of methods, with a goal to generate high returns through aggressive investment strategies, most notably short selling, leverage, program trading, swaps, arbitrage and derivatives. Legally, hedge funds are most often set up as private investment partnerships that are open to a limited number of investors and require a very large initial minimum investment. Investments in hedge funds are illiquid as they often require investors keep their money in the fund for at least one year.

Gold ETF

Gold Exchange Traded Fund (ETF) is a financial instrument like a mutual fund whose value depends on the price of gold. In most cases, the price of one unit of gold ETF approximately reflects the price of 1 gram of gold. As the price of gold rises, the price of the ETF is also expected to rise by the same amount. Gold exchange-traded funds are traded on the major stock exchanges including Zurich, Mumbai, London, Paris and New York There are also Closed-End Funds (CEF's) and Exchange-Traded Notes (ETN's) that aim to track the gold price.

Pension Funds

People look towards pension to give them a regular stream of income during their retirement years. The regulatory framework in the area is still evolving. Anyone can buy an annuity product from an insurance company, by paying a lump sum amount. Companies too can buy such contracts from insurance companies, on behalf of employees. The annuity payments from the insurance company under the contract fulfil the need for the regular stream of income for a retired employee. These operations of insurance companies are regulated by IRDA. New Pension Scheme (NPS) is a pension scheme regulated by the Pension Fund Regulatory and

Development Authority (PFRDA). The NPS provides for regular contributions by individuals or employers of individuals towards a pension plan. The contributions accumulate during the earning years of the individual. Towards retirement, the accumulations are to be used to buy an annuity from an insurance company. Like insurance, pension funds are a source of long term funds for the capital market. As seen above, different aspects of pension are regulated by PFRDA and IRDA. Pension funds also need to comply with the capital-market related regulations of SEBI while investing in the markets.

3.8 GROWTH IN INDIAN CAPITAL MARKET

Capital market consists of two different segments namely primary and secondary market. The primary market deals with new or fresh issue of securities and is, therefore, also known as new issue market; whereas the secondary market provides a place for purchase and sale of existing securities and is often termed as stock market or stock exchange.

Primary Market

The primary market consist of arrangements which facilitate the procurement of long term funds by companies by making fresh issue of shares and debentures. The companies make fresh issue of shares and debentures at their formation stage and, if necessary, subsequently for the expansion of business usually done through private placement financial institutions or by making public issue. Primary market provides an opportunity to the issuers of securities, both Government and corporations, to raise resources to meet their requirements of investment. Securities, in the form of equity or debt, can be issued in domestic /international markets at face value, discount or premium. The primary market issuance is done either through public issues or private placement. Under Companies Act, 1956, an issue is referred as public if it results in allotment of securities to 50 investors or more. However, when the issuer makes an issue of securities to a select group of persons not exceeding 49 and which is neither a right issue nor a public issue it is called a private placement.

Table- 3.2 Resource Mobilization by Corporate and Government Sector

(Rupees in Million)

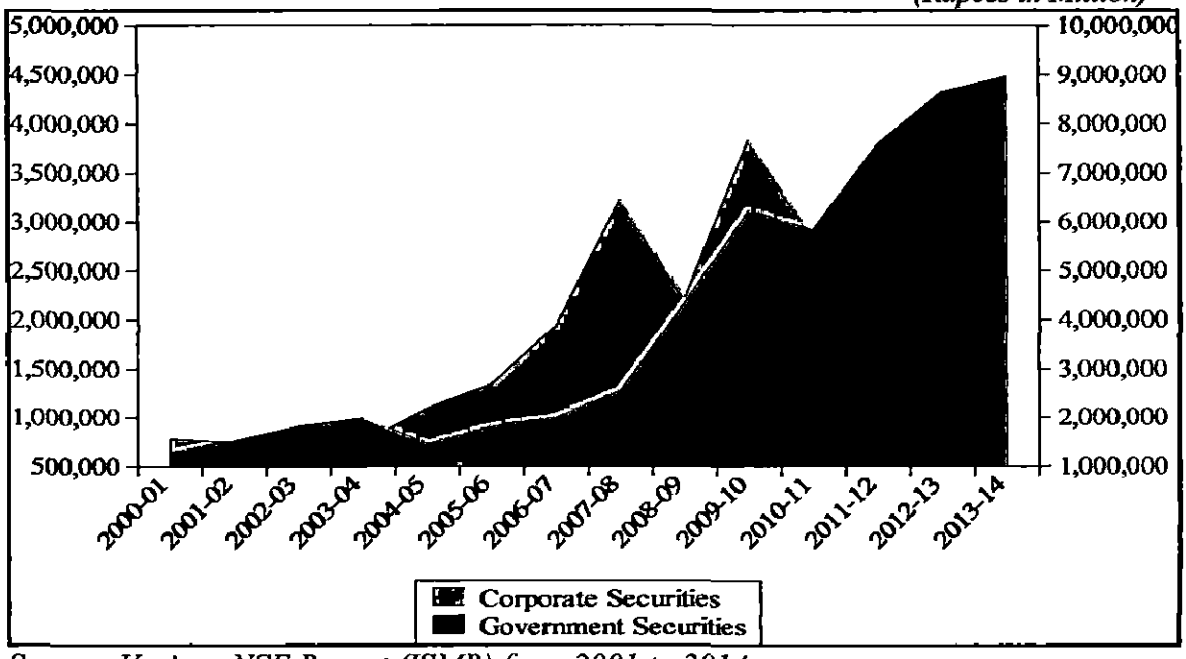
Year	I. Corporate Securities (A+B)	A. Domestic Issues (1+2)	Public Issue (1)	Private Placement (2)	B. Euro Issues	II. Government Securities (A+B)	A. Central Governments	B. State Government	Total (I+II)
2000-01	**783956**	741986	63620	678360	41970	**1284830**	1151830	133000	**2068786**
2001-02	**744032**	720620	71120	649500	23420	**1525100**	1338030	187070	**2269112**
2002-03	**752411**	718147	48667	669480	34264	**1819790**	1511260	308530	**2572201**
2003-04	**748500**	717520	78510	639010	30980	**1981570**	1476360	505210	**2730070**
2004-05	**1092970**	1059440	218920	840520	33530	**1456020**	1065010	391010	**2548990**
2005-06	**1346660**	1233080	269400	963680	113580	**1817470**	1600180	217290	**3164130**
2006-07	**1942560**	1772510	313850	1458660	170050	**2001980**	1793730	208250	**3944540**
2007-08	**3228310**	2962750	837070	2125680	265560	**2559840**	1882050	677790	**5788150**
2008-09	**2222040**	2174160	146710	2027450	47880	**4366880**	3185500	1181380	**6588920**
2009-10	**3838912**	3679242	254790	3424452	159670	**6236190**	4924970	1311220	**10075102**
2010-11	**2854000**	2760000	376000	2384000	94000	**5835000**	4795000	1040000	**8690000**
2011-12	**2336000**	2308000	129000	2180000	27000	**7590000**	6004000	1586000	**9926000**
2012-13	**3451000**	3441000	139000	3302000	10000	**8658000**	6885000	1773000	**12109000**
2013-14	**4033000**	4032000	133000	3899000	1000	**8971000**	7005000	1967000	**13004000**

Source: Various NSE Report (ISMR) from 2001 to 2014.

The primary market is an important part of capital market, which deals with issuance of new securities. It enables corporate, public sector institutions as well as the government to raise resources (through issuance of debt or equity based securities), to meet their capital requirements. The Corporate securities consist of Domestic issue and Euro issue, where as the government securities consist of central government securities and state government securities. Table 3.2 provides statistics on the resources mobilized by corporate and the government from domestic as well as international markets from 2000-01 to 2013-14. It can be seen that total resources mobilized through issuance of securities by corporate and the government was 13004 billion (increased by 7.4 per cent) at the end of 2013-14. The share of corporate securities was 31.1 per cent of the total resource mobilized in primary market, stood at 4033 billion. This expansion was driven by an increase in resources mobilized through private placement route. Capital raised through private placement went up by 18.1 per cent to 3,899 billion. However, resources mobilized through public issues witnessed a drop of 4.4 per cent to 133 billion, accounting for a mere 1 per cent of the total resources mobilized domestically. The share of government securities was 68.9 per cent of the total resource mobilized in the primary market at the end of 2013-14 where major potion was contributed by Central government. The Graph 3.3 shows the trends of corporate and government securities from 2000-01 to 2013-14.

Graph - 3.3 Trends of Resources Mobilized by Corporate and Government Securities

(Rupees in Million)



Source: Various NSE Report (ISMR) from 2001 to 2014.

Secondary Market

The secondary market known as stock market or stock exchange plays an equally important role in mobilising long-term funds by providing the necessary liquidity to holdings in shares and debentures. It provides a place where these securities can be encashed without any difficulty and delay. It is an organised market where shares and debentures are traded regularly with high degree of transparency and security. In fact, an active secondary market facilitates the growth of primary market as the investors in the primary market are assured of a continuous market for liquidity of their holdings. The major players in the primary market are merchant bankers, mutual funds, financial institutions, and the individual investors and the stockbrokers who are members of the stock exchange who facilitate the trading. Secondary market refers to a market where securities are traded after being offered to the public in the primary market or listed on the Stock Exchange. Secondary market comprises of equity, derivatives and the debt markets. The secondary market is operated through two mediums, namely, the Over-the-Counter (OTC) market and the Exchange-Traded market. OTC markets are informal markets where trades are negotiated.

Table- 3.3 Secondary Stock Market- Selected Indicators

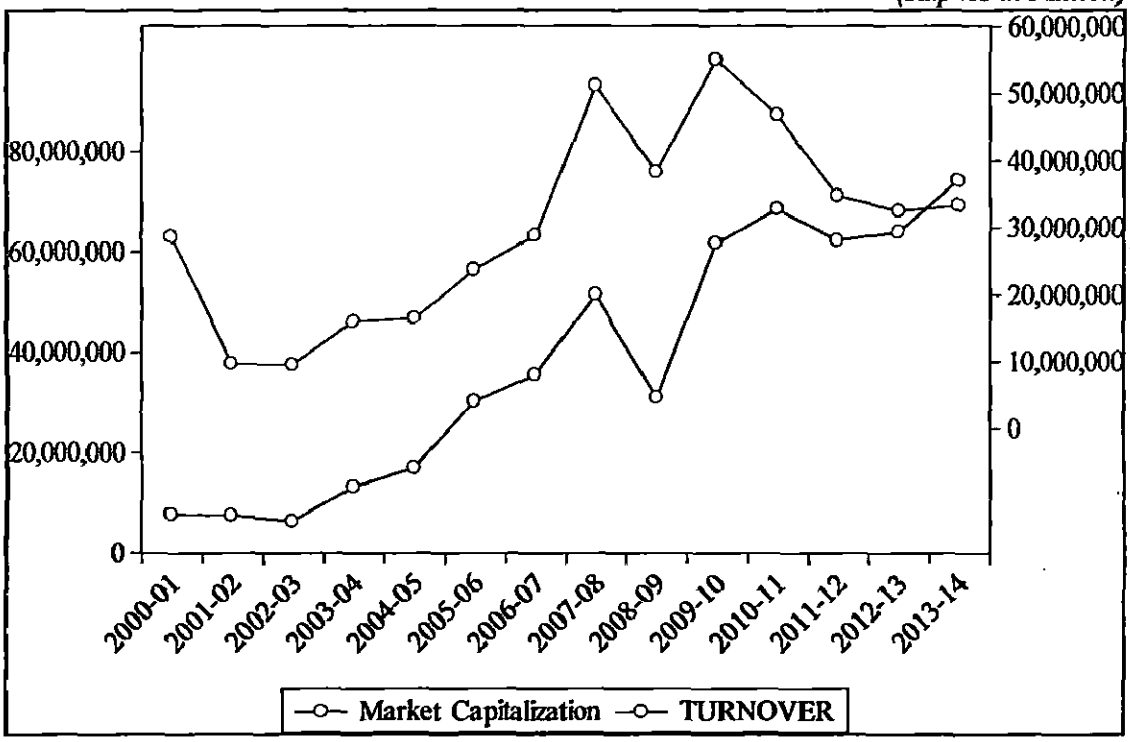
Year	No. of Brokers	No. of Listed Companies	SENSEX	S&P CNX Nifty	Market Capitalization (Million INR)	Market Capitalization Ratio (%)	Turnover (Million INR)	Turnover ratio (%)
2000-01	9782	9922	3604.4	1148.2	7688630	54.5	28809900	374.71
2001-02	9687	5795	3469.4	1129.55	7492480	36.36	9858180	119.56
2002-03	9519	5650	3048.7	978.2	6319212	28.49	9689098	153.33
2003-04	9368	5644	5590.6	1771.9	13187953	52.3	16209362	122.91
2004-05	9128	4730	6492.8	2035.7	16984280	54.4	16668960	98.14
2005-06	9335	4763	11280	3402.6	30221900	85.6	23901030	79.09
2006-07	9443	4796	13072.1	3821.6	35488081	86	29014715	81.76
2007-08	9487	4887	15644.4	4734.5	51497010	109.3	51308160	99.63
2008-09	9628	4921	9708.5	3021	30929738	54.9	38520970	124.54
2009-10	9772	4955	17527.8	5249.1	61704205	95.3	55168330	89.41
2010-11	10203	4987	19445.2	5833.8	68430493	87.8	46850341	68.46
2011-12	10268	5112	17404.2	5295.6	62191859	69.3	34843820	56.03
2012-13	10128	5191	18835.8	5862.6	63878869	63.7	32617000	50.99
2013-14	9411	5336	22386.2	6704.2	74152960	70.63	33414160	45.06

Source: Various NSE Report (ISMR) from 2001 to 2014 & BSE Database.
(Data for Market capitalization is only related to BSE)

The secondary market in the country offer screen-based trading system. There were 9411 trading members registered with SEBI at the end of March 2014 as shown in above table 3.3. The table also depicts the number of listed companies, movement of Sensex and Nifty, market capitalisation, market capitalisation ratio, turnover and turnover ratio since 2000-01 to 2013-14.

Graph-3.4 Trend of Market Capitalisation and Turnover in Indian Stock Market

(Rupees in Million)

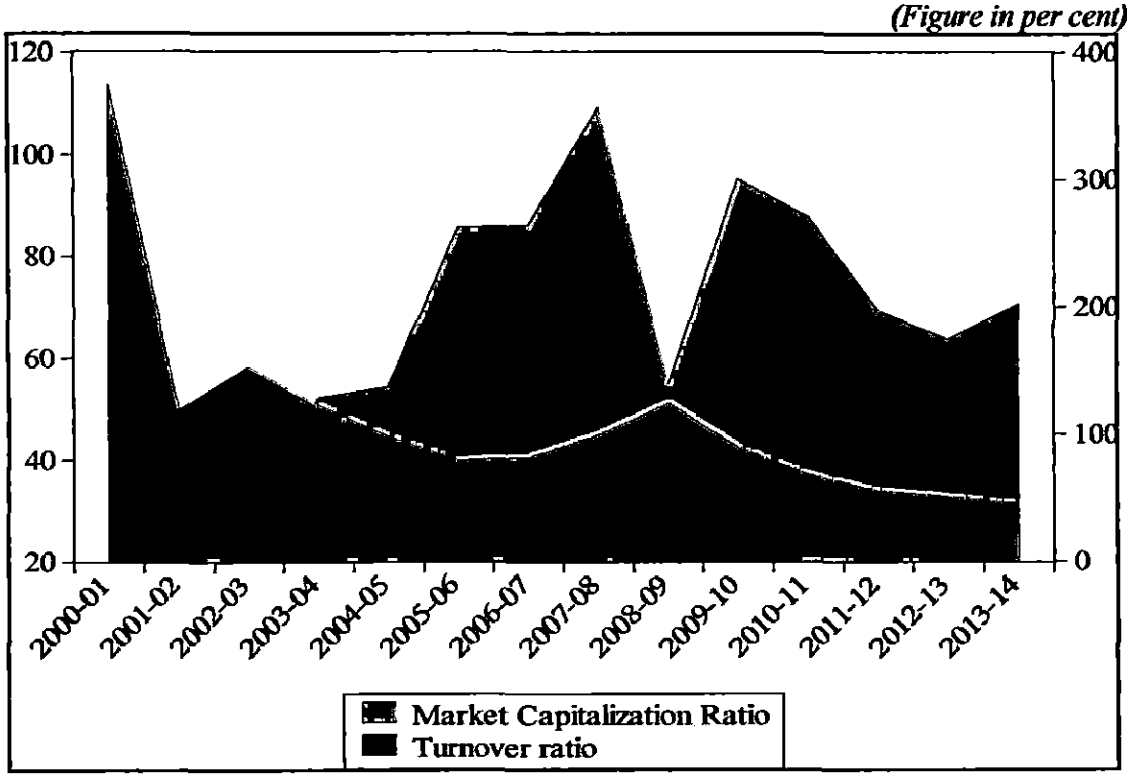


Source: Various NSE Report (ISMR) from 2001 to 2014 & BSE Database

The market capitalization has grown over the period, indicating that more companies are using the trading platform of the stock exchange. Graph 3.4 shows the graphical presentation of market capitalization and turnover in Indian secondary market. The market capitalisation on BSE (taken as a proxy for India) was around 74152 billion at the end of March 2014. The turnover which is an indicator of market liquidity has shown a mix pattern of change. It can be observed from the Graph 3.4 that in 2009-10 turnover was highest during last 14 years and it continuous decline in next three years. In 2013-14, turnover was quite stable stood at 33414 billion.

Graph 3.5 Trends of Market Capitalisation Ratio and Turnover Ratio

(Figure in per cent)



Source: Various NSE Report (ISMR) from 2001 to 2014 & BSE Database

Market capitalization ratio is ratio of stock market capitalization and the value of market GDP. It is used as a measure to denote the importance of equity market relative to the GDP. The market capitalisation ratio was 54.5 per cent in 2000-01 and reached to its highest in 2007-08 when it was 109.3 per cent. At the end of March 2014, the market capitalisation ratio stood at 70.63 per cent. Turnover ratio is the total value of shares traded during the period divided by the average market capitalization for the period. In 2000-01, the turnover ratio was one of the highest turnover ratios in the world. Graph 3.5 shows that the turnover ratio was decline rapidly over the period and at the end of 2013-13 it was 45.06 per cent.

BSE Sensitive Index

The BSE Sensitive index has long been known as the barometer of the daily temperature of Indian bourses. In 1978-79 stock market contained only private sector companies and they were mostly geared to commodity production. Hence, a sample 30 was drawn from them. With the passage of time more and more companies private as well as public came into the market.

S&P CNX Nifty

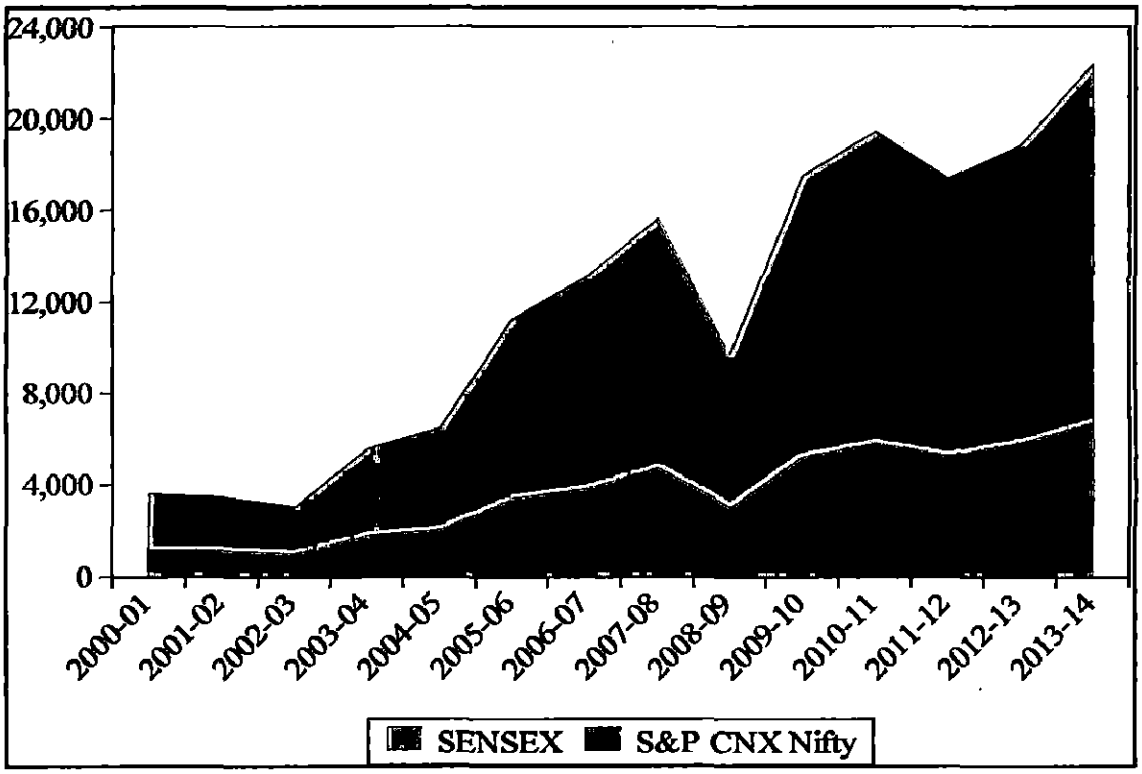
This index is built by India Index Services Product Ltd (IISL and Credit Rating Information Services of India Ltd. (CRISIL). The CRISIL has a strategic alliance with

Standard and Poor rating Services. Hence, the index is named as S&P CNX Nifty. NSE - 50 indexes was introduced on April 22, 1996 with the objectives given below:

- Reflecting market movement more accurately
- Providing fund managers a tool for measuring portfolio returns and market return.
- Serving as a basis for introducing index based derivatives.

Nifty replaced the earlier NSE-100 index which was established as an interim measure till the time the automated trading system established.

Graph - 3.6 Movements of Sensex and S&P CNX Nifty



Source: NSE & BSE Database.

Graph 3.6 clearly demonstrate the trend in the movement of Sensex and S&P CNX Nifty from 2000-01 to 2013-14.The stock market in India experienced several reversals during 14 years period and from the graph it appears that both index are moving in same direction. The Sensex fell sharply from 3604 in2000-01 to 3469 in2001-02 registering a decline of 3.75 per cent while S&P CNX Nifty with a lesser downturn of 1.65 per cent from 1148 in 2000-01 to 1129 in 2001-02.From 2003-04 to 2007-08 the market witnessed a increasing trend for the stocks as the Sensex and S&P CNX Nifty moved upward touching 15644 and 4734 respectively at the end of 2006-07. Due to financial crisis, stock market during the next year experienced bearish sentiments as the Sensex decline by 61.51 per cent and S&P CNX Nifty by 36.18 per

cent. At the end of 2014, the Sensex reached to 22386 and S&P CNX Nifty touched a new height of 6704.

3.9 DEVELOPMENT IN INDIAN CAPITAL MARKET

Over a period, the Indian securities market has undergone remarkable changes and grown exponentially, particularly in terms of resource mobilisation, intermediaries, the number of listed stocks, market capitalisation, turnover and investor population. The following are the principal development undertaken in Indian Capital market.

Screen Based Trading

Prior to setting up of NSE, the trading on stock exchanges in India was based on an open outcry system. The system was inefficient and time consuming because of its inability to provide immediate matching or recording of trades. In order to provide efficiency, liquidity and transparency, NSE introduced a nation-wide on-line fully automated Screen Based Trading System (SBTS) on the CM segment on November 3, 1994 followed by the BSE switched over to online trading system known as BSE On-Line Trading system (BOLT) in 1995.

Reduction of Trading Cycle

Earlier, the trading cycle for stocks, based on type of securities, used to vary between 14 days to 30 days and the settlement involved another fortnight. The Exchanges, however, continued to have different weekly trading cycles, which enabled shifting of positions from one Exchange to another. It was made mandatory for all Exchanges to follow a uniform weekly trading cycle in respect of scrips not under rolling settlement. In December 2001, all scrips were moved to rolling settlement and the settlement period was reduced progressively from T+5 to T+3 days. From April 2003 onwards, T+2 days settlement cycle is being followed.

Equity Derivatives Trading

In order to assist market participants in managing risks better through hedging, speculation and arbitrage, SC(R) A was amended in 1995 to lift the ban on options in securities. Trading in derivatives, however, took off in 2000 with index futures after suitable legal and regulatory framework was put in place. The market presently offers index futures, index options, single stock futures and single stock options.

Demutualisation

Historically, stock exchanges were owned, controlled and managed by the brokers. In case of disputes, integrity of the stock exchange suffered. NSE, however, was set up with a pure demutualised governance structure, having ownership, management and trading with three different sets of people. Currently, all the stock exchanges in India have a demutualised set up.

Dematerialisation

The old settlement system was inefficient due to (i) the time lag for settlement and (ii) the physical movement of paper-based securities. To obviate these problems, the Depositories Act, 1996 was passed to provide for the establishment of depositories in securities with the objective of ensuring free transferability of securities with speed and accuracy. There are two depositories in India, *viz.* NSDL and CDSL. They have been set up to provide instantaneous electronic transfer of securities. *Demat* (Dematerialised) settlement has eliminated the bad deliveries and associated problems. To prevent physical certificates from sneaking into circulation, it has been made mandatory for all newly issued securities to be compulsorily traded in dematerialised form. Now, the public listed companies making IPO of any security for Rs.10 crore or more have to make the IPO only in dematerialised form.

Clearing Corporation

The anonymous electronic order book ushered in by the NSE did not permit members to assess credit risk of the counter-party and thus necessitated some innovation in this area. To address this concern, NSE had set up the first clearing corporation, *viz.* National Securities Clearing Corporation Ltd. (NSCCL), which commenced its operations in April 1996.

Globalisation

Indian companies have been permitted to raise resources overseas through issue of ADRs, GDRs, FCCBs and ECBs. Further, FIIs have been permitted to invest in all types of securities, including government securities and tap the domestic market. The investments by FIIs enjoy full capital account convertibility. They can invest in a company under portfolio investment route up to 24 per cent of the paid up capital of the company. This can be increased up to the sectoral cap/statutory ceiling, as applicable to the Indian companies concerned, by passing a resolution of its Board of Directors followed by a special resolution to that effect by its general body. The Indian stock exchanges have been permitted to set up trading terminals abroad. The

trading platform of Indian exchanges is now accessible through the Internet from anywhere in the world. RBI permitted two-way fungibility for ADRs / GDRs, which means that the investors (foreign institutional or domestic) who hold ADRs / GDRs can cancel them with the depository and sell the underlying shares in the market.

Launch of India VIX

Volatility index is a measure of market's expectation of volatility over the near term. It measures the amount by which an underlying Index is expected to fluctuate in the near term, based on the order book of the underlying index options. India's first volatility index, India VIX (based on the Nifty 50 Index Option prices) was launched by NSE in April 2008.

Direct Market Access

In April 2008, SEBI allowed the Direct Market Access (DMA) facility to the institutional investors. DMA allows brokers to offer their respective clients, direct access to the Exchange trading system through the broker's infrastructure without manual intervention by the broker.

Currency Futures and Interest Rate Futures

On August 29, 2008, NSE launched trading in currency future contracts in the USD-INR pair for the first time in India. Trading in other currency pairs like Euro–INR, Pound Sterling–INR and Japanese Yen was further made available for trading in March 2010. On August 31, 2009, futures interest rate was launched on the National Stock Exchange.

ASBA

Application Supported by Blocked Amount (ASBA) is a major primary market reform. It enables investors to apply for Initial Public Offers (IPOs), Follow on Public Offers (FPOs) and rights issues without making a payment. Instead, the amount is blocked in investors' own account and only an amount proportionate to the shares allotted goes out when allotment is finalized.

3.10 CONCLUSION

The capital market is the barometer of any country's economy and provides a mechanism for capital formation across the world. There is a transformation in the financial intermediation from a credit based financial system to a capital market based system which is partly due to a shift in financial policies from financial repression

(credit controls and other modes of primary sector promotion) to financial liberalization. This led to an increasing significance of capital markets in the allocation of financial resources. Secondly one of the most profound and far-reaching financial phenomenon in the late twentieth century and the forepart of this century is the explosive growth in international financial transactions and capital flows among various financial markets in developed and developing countries. The Indian stock market is one of the earliest in Asia being in operation since 1875, but remained largely outside the global integration process until the late 1980s.A number of developing countries in consultation with the International Finance Corporation and the World Bank took steps in the 1980s to establish and revitalize their stock markets as an effective way of mobilizing and allocation of finance. In line with the global trend, reform of the Indian stock market began with the establishment of Securities and Exchange Board of India in 1988.

The Indian capital market has undergone significant change in the last two decades. It has become efficient through use of modern day technology and proactive legislation. It has attracted significant global interest and has managed to establish confidence of both global and local investors. However, as the economy grows, so does its requirements. Change is a constant and therefore the Indian capital markets also need to evolve and ensure that it meets the challenges of the current day. Corporate governance is a key focus area and capital markets need to ensure introduction of swift legislative changes to ensure confidence in the market. As the global financial crisis begins to recede and normalcy returns in the market, India needs to set forth infrastructure to provide the necessary boost to the corporate debt market and introduce innovative financial products, while ensuring the best interests of the investors in mind.

REFERENCES

Agarwal & Singh. (2002). Merger Announcements and Insider trading Activity in India: An empirical Investigation. *NSE research Initiatives*, Paper No.8.

Alam N. (2011). FII's role in the promotion of Indian capital market. (Unpublished Doctoral Thesis), *Aligarh Muslim University,* India.

Alizadeh A. G. (2012). Role of stock exchanges in the promotion of capital market. A comparative study of India and Iran.(Unpublished Doctoral Thesis).*Aligarh Muslim University*, India.

Banerjee C. & Shah A. (2012). Deepening of Capital Markets: Enabling Faster economic Growth. *Confederation of Indian Industry*, 1-46.

Bhattacharya & Samanta. (2001). A tale of two indices: the story of the NASDAQ and The Sensex. *Journal of Quantitative Economics, 1*(1), 89-102.

Biswal P. C. And Kamaiah B. (2001). Stock market Development in India: Is there any trade break? *Economic and Political Weekly, 36*(4), 377-384.

Cho J. Y. (n.d.). Indian Capital Market: Recent developments and policy issues, retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?rep=rep1& type=pdf&doi= 10.1.1.194.4505.

Christensen H.B.et al (2011), Capital Market Effects of Securities Regulation: The Role of Prior Regulation, Implementation and Enforcement. *NBER Working Paper 16737*, retrieved from <http://www.nber.org/public_html/confer/2011/CFf11/Christensen_Hail_Leuz.pdf>, accessed 20 February 2012.

City of London Economic Development. (2010). Emerging markets- International capital raising trends. *Trusted Sources Research & Network*, 1-56.

Clayton M.J.et al. (2006).The presence and market-structure of exchanges around the world. *Journal of Financial Markets, 9*, 27–48.

Fact Book. (2012). The Incredible Investment Destination. *Department of Economic Affairs, Ministry of Finance Government of India.*

John K. C. & Kumar Sasi.(2010). Indian Primary Market- A Review. *International Journal of Contemporary Business Studies, 1*(1), 6-15.

Sindhu K. (2007). Stock market behaviour and economic growth in India. (Unpublished Doctoral Thesis). *Mahatma Gandhi University*, India.

Mishra et al. (2010) Performance of Indian capital Market- An empirical analysis. *European Journal of Economics and Administration Sciences*, (23), 49-57.

Mishra P. K. and Pradhan B. B. (2009). Capital Market efficiency and Financial Innovation – A Perspective Analysis. *The Research Network*,*4*(1), 1 -5.

Mishra, P. K. (2009). Indian Capital Market - Revisiting Market Efficiency. *Indian Journal of Capital Markets*, *2*(4), 30-34.

Muffee V. M. (2012). The role of securities and exchange board of India (SEBI) in regulating the Indian capital market: A case study of Ludhiana stock exchange (Unpublished Doctoral Thesis). *Punjab Technical University*, India.

Nayak J. K. (2006). Analysis of Indian capital market: Pre and Post Liberalization. Vilakshan, XIMB Journal of Management, 3(2), 139-178.

NSE Report. (2001). Indian security Market- A Review.Vol. IV 2001, India.

NSE Report. (2002). Indian security Market- A Review.Vol. V, 2002, India.

NSE Report. (2003). Indian security Market- A Review.Vol. VI, 2003 India.

NSE Report. (2004). Indian security Market- A Review.Vol. VII 2004, India.

NSE Report. (2005). Indian security Market- A Review.Vol. VIII 2005, India.

NSE Report. (2006). Indian security Market- A Review.Vol. IX 2006, India.

NSE Report. (2007). Indian security Market- A Review.Vol. X 2007, India.

NSE Report. (2008). Indian security Market- A Review. Vol. XI, 2008 India.

NSE Report. (2009). Indian security Market- A Review.Vol. XII 2009, India.

NSE Report. (2010). Indian security Market- A Review.Vol. XIII 2010, India.

NSE Report. (2011). Indian security Market- A Review.Vol. XIV 2011, India.

NSE Report. (2012). Indian security Market- A Review.Vol. XV 2012, India.

NSE Report. (2013). Indian security Market- A Review.Vol. XVI 2013. India.

NSE Report. (2014). Indian security Market- A Review.Vol. XVII 2014. India.

Obstfeld M. & Taylor A. M. (2003).Globalization and Capital Markets. National Bureau of Economic Research, Working paper no. w8846, 121-187.

Pai T. A. (2007). Comparative Analysis of Indian Stock Market with International Market. Great Lakes Herald, *1*(1), 39-71.

Rajesh A. (2010). Security Speed of Adjustment and Market Quality: A Case of National Stock Exchange of India. *The IUP Journal of Applied Finance*, *16*(6), 54-64.

Raju M. T. & Ghosh, A. (2004). Stock Market Volatility - An International Comparison. *WPS No.8, SEBI.*

SenPronab et al. (2003). Developing the Indian Debt Capital Markets: Small Investor Perspectives. *Perspective Planning Division, Planning Commission, Govt of India.* 1-30.

Shah D. (2012). Management of Corporate Governance practices in a dynamic capital market (Unpublished Doctoral Thesis), *Gujarat University*, India.

Sharma P. et al. (2007). Deepening India's Capital Market: The way Forward. *USAID Financial Institutions Reforms and Expansion- Regulatory (FIRE-R).* 1-69

Sheok and Anuradha. (n.d.). Performance of initial public offering (IPO's) in Indian capital market (Unpublished Doctoral Thesis).*Maharishi Dayanand University,* Rohtak, India.

Stulz. (2009). Securities Laws, Disclosure and Capital Markets in the Age of Financial Globalisation. *Journal of Accounting Research,* 47(2), 349–90.

Thushara G. (2007). Impact of foreign portfolio investment on Indian Capital markets (Unpublished Doctoral Thesis). *University of Calicut*, India.

UNCTAD. (*2008*). Trade and Development Report, 2008.Commodity prices, financial flows and financing of investment. *United Nations publications*, Sales No.E.08.II.D.21.

Vasudev P. M. (2007). Capital Market and Corporate Governance in India: An overview of recent trends. The Corporate Governance Law Review, 3(3), 255-282.

CHAPTER-4

GROWTH AND DEVELOPMENT OF ASSET MANAGEMENT COMPANIES IN INDIA

way of floating various mutual funds schemes and used in the investment sector. Asset management companies seek to optimize risk-adjusted performance in light of the investor's attitude to and ability to cope with risk.

The constituents of the mutual fund consist of sponsor, board of trustee, asset management company, custodian and registrar & transfer agent. Governance is an important consideration for Asset Management Companies. All mutual funds must register with SEBI before launching an individual fund offering, and SEBI includes strict independent regulations governing members of trustee and AMC boards. SEBI was officially established by the Government of India in the year 1988 and given statutory powers in 1992 with SEBI Act 1992 being passed by the Indian Parliament. Controller of Capital Issues was the regulatory authority before SEBI came into existence; it derived authority from the Capital Issues (Control) Act, 1947. Initially SEBI was a non-statutory body without any statutory power. However in the year of 1995, the SEBI was given additional statutory power by the Government of India through an amendment to the Securities and Exchange Board of India Act, 1992. In April, 1988 the SEBI was constituted as the regulator of capital markets in India under a resolution of the Government of India *(Wikipedia, n.d.)*. Over the years, SEBI's regulations have helped liberalize the industry and pave the way for increased competition and innovation, while simultaneously promoting investor protections, comprehensive disclosure, and fair pricing. For example, in order to align the interest of investors and distributors and help reduce product churn, SEBI abolished distributor entry loads in 2009 and shifted mutual fund distribution to a fee-based model, a landmark change that forced many asset management companies to reshape their business models. The asset management business has two dimensions namely investors and assets. Asset management companies can globalize by providing investment products to foreign investors or by offering foreign asset investment products *(Nomura Research Institute Ltd., 2010, p.1)*.

4.2 FUNCTIONS OF ASSET MANAGEMENT COMPANY

The landscape of the financial sector in India is continuously evolving, accredited to regulatory changes being undertaken, which is leading market participants like the asset management companies (AMCs) to restructure their policies and adopt business

practices which will yield sustainable benefits *(Confederation of Indian Industry, 2010, p.7)*.

The asset management company has to discharge mainly the following functions-

- Launching and operating various schemes of the Mutual Fund and performing Portfolio Management functions for various schemes of the Mutual Fund.
- Taking investment decision and making investments of the funds through market dealers/ brokers in the secondary market securities or directly in the primary capital market or money market instruments.
- Realize fund position by taking into account of all receivables and realizations, moving corporations involving declaration of dividends etc., to compensate investors for their investment in units.
- Maintaining proper accounting and information for pricing the units and arriving at Net Asset Value (NAV).
- The asset management company has to give a feedback to the trustees about its fund management operation and has to maintain a perfect information system.

4.3 ELIGIBILITY CRITERIA FOR APPOINTMENT OF ASSET MANAGEMENT COMPANY

SEBI has lain down the regulation 1996, the following eligibility criteria for the appointment of an asset management company *(Tripathi N. P., 2007, p. 107)*:

- In case of an existing AMC, it should have a sound track record, good reputation and fairness in transactions. A sound track record means net worth and profitability of the AMC.
- The directors of the AMC should be persons possessing adequate professional experience in finance and financial services related field and must not have been found guilty of moral turpitude or convicted of any economic offence or violation of any security laws.
- The key personnel of the AMC or mutual fund or any intermediary whose registration has been suspended or cancelled at any time by SEBI.
- The Board of Director of the AMC has at least 50 per cent of the directors who are not associates of or associated in any manner with the sponsor or any manner with the sponsor or any of its subsidiaries or trustees.

4.1 INTRODUCTION

Asset management mainly comprises with three concepts i.e. asset structuring, investment management and investment management services. Asset structuring refers to all activities that play a part in structuring or wrapping of assets. Allocating long-term asset linked to possible liabilities is the outcome of this process. Investment management is the core discipline in classical asset management. Although the terms are often used interchangeably, investment management refers only to the investment decisions made on a day-to-day basis within the limits of the defined asset structure. Investment management services include elements of financial analysis, research, risk analysis for investments, and comprehensive reporting on the value added. Asset management is defining as the professional management of securities and other assets (real estate, commodities etc.). Its purpose is to meet investment goals specified by the investors, from whom a fee is charged either directly or via collective investment programs. Asset management means the process of handling the investment instruments in such a manner so that it can help in achieving the desired or set investment goals of the investor *(Finance Maps of World, n.d.)*. Asset management is defined as the systematic process of long term maintenance of assets, with the objective of bringing out the best results from the assets. Asset Management is an important part of the financial sector throughout the world. It manages huge amount of investments and helps clients to reach financial goal within a specific period of time. Asset management offers a wide range of investment options. However, with the growing complexity in financial markets, investors are demanding more options. The asset management companies are constantly looking to develop new options. They offer various asset management services for different sectors. These sectors have their own assets and set of expectations from these assets. It is a business of skill and scale risk factor and growth rate of these assets are also different. So it is hard to make a single plan to manage assets for all these sectors. Depending upon the demand of the clients and the market conditions, the asset management companies have developed their services. *(Kale R. J. & Panchapagesan V. 2012, p.255).*

An Asset Management Company (AMC) is an investment management firm that invests the funds of investors in securities in line with the stated investment objectives. The diversification of a portfolio is done by investing in such securities which are inversely correlated to each other. They collect money from investors by

- The chairman of the AMC is not a trustee of any mutual fund. The condition that he should also not be a director of a trustee company has not been detected.
- The AMC has a net worth of not or less than Rs. 10 crore.
- The sponsor or the trustee shall appoint an asset management company to manage the affairs of the mutual fund and operate the schemes of such fund.
- Its memorandum and articles of association have to be approved by the SEBI. Statutory disclosures regarding AMCs operations should be periodically submitted to SEBI.

4.4 TERMS AND CONDITIONS TO BE COMPILED WITH ASSET MANAGEMENT COMPANY

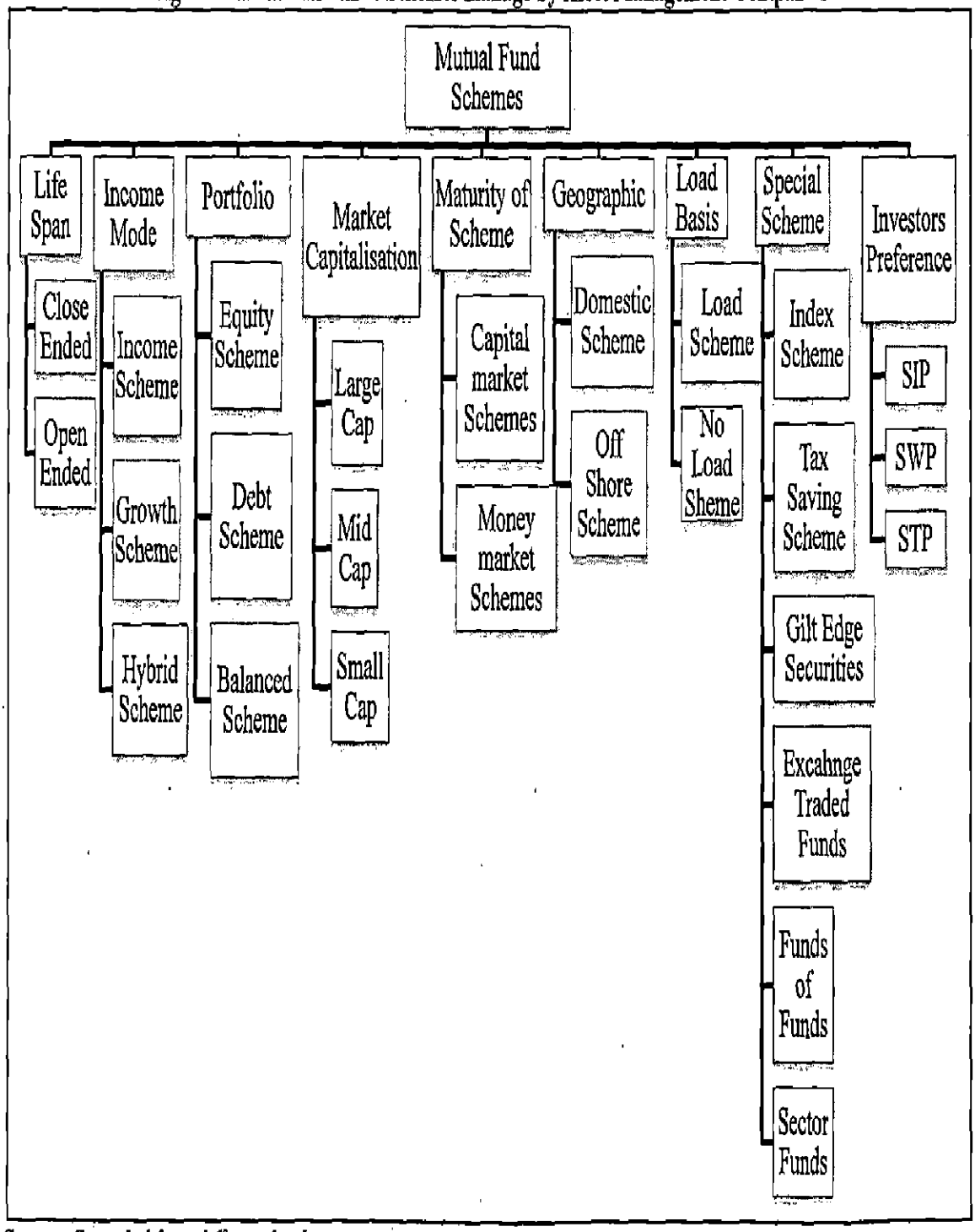
AMCs are regulated by SEBI, which was established in 1992. Going forward continued vigilance from SEBI is expected over the asset management companies, such that effective compliance and risk management is increasingly becoming an important business competency for AMCs operating in India *(Deloitte Center for Financial Services, 2012, p. 14)*. The following conditions are to be followed with the AMC to retain SEBI for approval *(Tripathi N. P., 2007, p. 108)*:

- Its director shall not be appointed in another AMC unless he is independent director and SEBI has granted approval for such an appointment.
- The AMC shall inform SEBI forthwith of any material change in the information or particulars previously furnished which have a bearing on the approval granted by it.
- Appointment of a director of an AMC shall be made only with the approval of trustees.
- The AMC undertakes to comply with these regulations.
- Any change in the controlling interest of the AMC shall be only with the prior approval of trustees.
- The AMC shall furnish such information and documents to the trustees as and when required by them.
- An AMC cannot invest in its own schemes until it is disclosed in the offer document. Moreover in such investments, AMC will not be eligible for fees also.
- The appointment of an AMC can be terminated by the majority of trustees or by 75 per cent of unit holders.

4.5 CLASSIFICATION OF MUTUAL FUND SCHEMES MANAGE BY ASSET MANAGEMENT COMPANY

The main objective of the asset management companies is to provide better returns to investors at minimum risk. Mutual funds are of different types and invest in a wide range of securities in varying proportions.Growth and development of various mutual funds products in the Indian capital market has proved to be one of the most catalytic instruments in generating momentous investment growth in the capital market *(Debasish S.S., 2009, p.1)*. There are different ways in which various mutual fund schemes can be classified.

Figure - 4.1 Mutual Funds Schemes manage by Asset Management Companies



Source: Compiled from different books.

Open Ended, Close Ended and Interval Schemes

Open ended scheme means a scheme of a mutual fund which offers units for sale without specifying any duration for redemption. The open ended scheme sells and repurchases the units of mutual funds on a continuous basis. The essential feature of open ended scheme is the liquidity. On the other hand, close ended scheme is one in which the period of redemption is specified. The close ended scheme is one which the limited number of units is sold to investors during a specified period only. Thereafter, any transaction in these units can be take place only in secondary market. The market price of these units of a closed- ended mutual fund scheme is determined by the market forces of demand and supply. Interval Schemes are those that combine the features of open-ended and close-ended schemes. The units may be traded on the stock exchange or may be open for sale or redemption during pre-determined intervals at NAV related prices.

Growth, Income and Hybrid Schemes

The mutual funds are called income funds when they promise a regular and guaranteed return in the form of dividends to the investors. The portfolio of these schemes is usually consisting of fixed income investment such as bonds and debenture etc. The income scheme is also called as dividend scheme. A variant of income fund is known as Dividend Yield Fund. They invest funds in shares of those companies that pay high dividends. Growth fund scheme is one which offers capital appreciation as well as a variable dividends opportunity to the investors. The investors may get the dividend income from the mutual fund on a regular basis and the capital appreciation is available in the form of increase in market price. There may also be income cum growth (hybrid funds) where the investor may be offered fixed income as well as growth opportunities.

Equity, Debt and Balanced Schemes

In Equity scheme, the funds are invested primarily in equity shares only. These equity schemes are high on risk scale as the shares prices are volatile. These schemes may be income or growth scheme. These funds try to reduce the risk by diversifying the investments in the different type of shares. The Debt schemes are those schemes in which collected funds are invested in debt securities. A variant of debt schemes may be in the form of governmental securities fund schemes wherein the funds are invested in the government securities. A balanced scheme provides both growth and

regular income as these schemes invest both in debts and equity instruments in the proportion as disclosed in the documents.

Large, Mid, Small Cap Schemes

In recent past, mutual funds in India have launched several schemes with a focus on market capitalization of companies. In India, the National Stock Exchange defines mid cap companies as those having average six months market capitalization between Rs 75 crore to Rs. 750 crore. Small cap are those which are having market capitalization less than Rs. 75 crore and large cap which consist of market capitalization more than Rs. 750 crore.

Capital and Money Market Schemes

Money market scheme as one which has been set up the objective of investing in money market instruments like commercial papers, commercial bills, treasury bills etc. Money market mutual funds are a part of short term pooling arrangements of funds. These are open ended fund, highly liquid and risk free because of nature of their investment. The capital market schemes are those schemes which invest the collected funds into instrument of capital market. These schemes may give high returns commensurate with risk taken if funds invested rationally and manage properly.

Domestic Funds and Off- Shore Funds

The domestic funds schemes are those which are open for subscription by the investors of the country of origin only. Most of the mutual funds launched in India are domestic mutual funds. The off shore funds are those which are to be subscribed abroad. These mutual funds bring funds in the capital market in terms of foreign exchange. At present several off shore mutual fund schemes have been floated in India. The Indian asset management industry has been grappling with the challenges of becoming an international business both through feeder funds in India for investing in offshore funds and mobilizing funds offshore for investing in India *(Stuart S., 2009, p. 2)*.

Load and No Load Schemes

A load scheme is one that charges a per cent of NAV as entry or exit fees. Whenever investors buy or sell the units, a fee is charged by the fund to meet the administrative expenses. On the other hand, a no load scheme is one which does not charge any fees on entry or exit. In case of no load scheme, all transactions of sale and repurchase of units are done at NAV while in case of load scheme, the repurchase is made at a price

less than NAV and sale is made at a price mare than NAV. To maintain parity among all classes of unit holders, SEBI decided that no distinction among unit holders should be made on the basis of the amount of subscription while charging exit load. The profit of both distributors as well as the asset management companies (AMCs), which were already under pressure as a result of the removal of the entry load by SEBI, would be further affected *(Bose Suchismita, 2012, p.94)*. Recently in India, the industry regulator, SEBI has instructed that no entry load be charged for all MF schemes launched on or after August 1, 2009. Distributors receive commission from the investors based on investor's assessment of various factors including service rendered. Exit loads may or may not be charged to the investors and it varies depending on the period they stay invested in the scheme *(Confederation of Indian Industry, 2010, p.17)*.

Index Schemes

In this case, the funds collected by the mutual funds are invested in the shares forming the stock exchange Index. These funds are also known as growth funds. The funds are allocated on the basis of proportionate weight of different shares in the underlying index.

Tax Saving Schemes

These mutual funds schemes are designed to avail tax exemptions and concessions to the investors. These schemes help individual investors in their tax planning. These schemes are also known as Equity linked saving schemes were entitled to tax benefits under section 88 of the Income tax.

Gilt Funds

The funds of these schemes are invested exclusively in government securities. These funds are low return and low risk and popular among the risk averse investors.

Exchange Traded Funds

Exchange Traded Funds (ETF) refers to basket of securities that are tradable at a stock exchange. They are somewhat similar to Index fund schemes. The ETF's are so called because they are listed on a stock exchange and are traded as any other security. ETF's have the characteristics of open ended mutual funds as that of listed shares. ETFs do not sell their units directly to the investors. Rather a security firm creates an ETF by depositing a portfolio of shares in line with an index selected. The security firm creates units against the portfolio of shares. These units are sold to retail

investors. So the ETF has portfolio of shares as well as liability towards the holders of ETF units.

Fund of Funds

A fund of funds scheme means a scheme that invests primarily in other scheme of the same mutual fund or other mutual funds. FOF scheme is one which invests in other mutual funds rather than directly in equities and debts, FOF schemes are beneficial to those investors who do not have the time or the expertise to track the market and to manage the portfolio of different mutual funds. FOF schemes have not been popular with Indian investors.

Sector Funds

Sector funds schemes are those under which the funds are planned to be invested in a particular region, industry or sector. For example Technology, Banking, Infrastructure, Power etc are the sector in which the collected funds are invested according to the objective.

Systematic Investment Plan

A systematic investment plan is one in which investor invest in a mutual fund scheme, a pre specified amount, at pre specified intervals. So in SIP the investor can invest smaller amounts in different instalment rather than a lump sum. The amount is invested in the units of mutual fund at the time of prevailing NAV. Number of units which the investors will get every month depend upon the prevailing NAV of the scheme. Concept of SIP is based on principle of cost averaging.

Systematic Withdrawal Plan

SWP is the facility provided by the mutual fund to its unit holders to withdraw money a scheme on a regular basis. It is particularly suitable to those who need regular income. SWP may be available in following option-

- Fixed withdrawal, where a fixed specified amount is withdrawn on monthly or quarterly basis.
- Appreciation withdrawal, where some per cent of the appreciated amount can be withdrawn on monthly/quarterly basis.

Systematic Transfer Plan

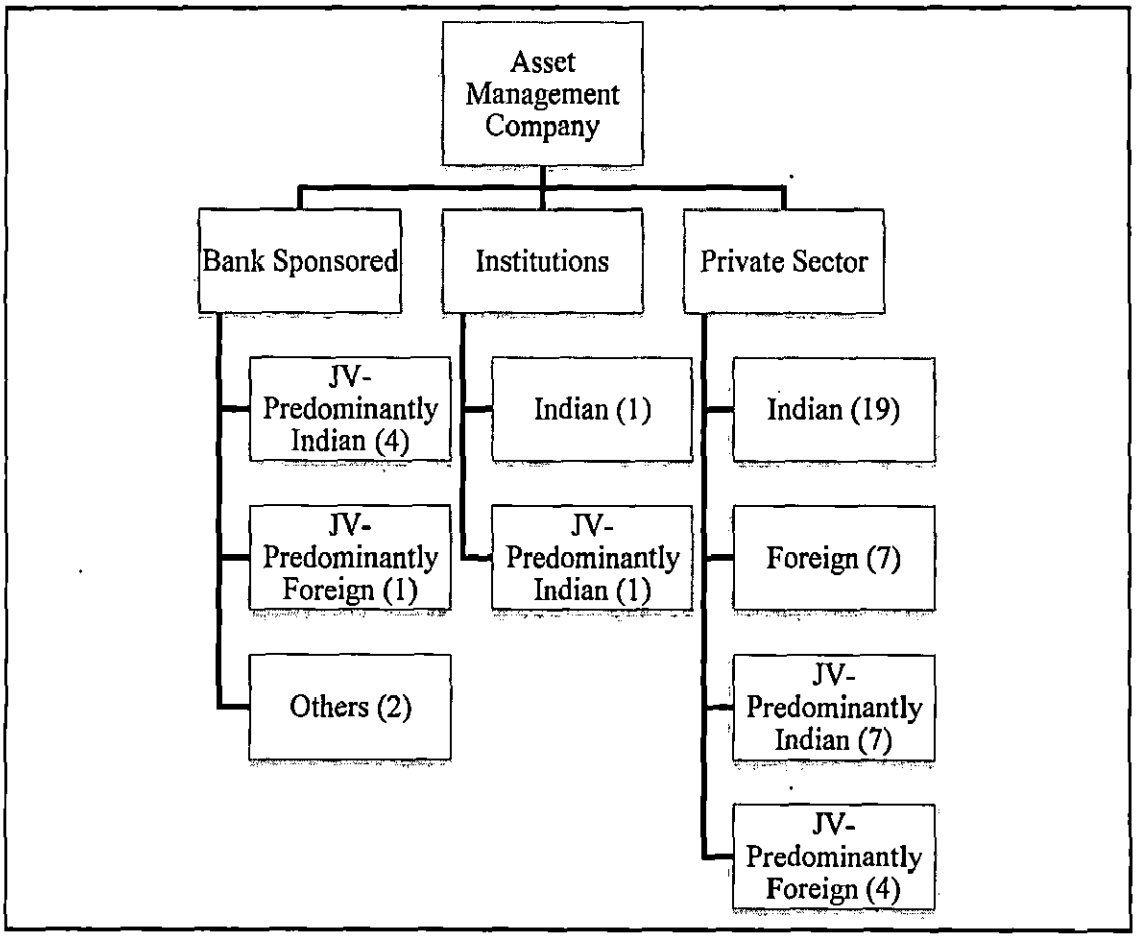
STP is a situation when an investor in the mutual fund scheme has instructed the mutual fund to transfer a specified amount from one scheme to another scheme. Two of such types of transfers are-

- Transfer of specified amount per month from one scheme to another. In this case, some units of the existing scheme are redeemed at the prevailing NAV. This will raise a specific amount which is invested in the other notified schemes at the rate of NAV of the other scheme.
- Transfer of gain on one scheme to another scheme. In this case, only the gain is shifted and invested in the other scheme. The initial amount invested in the scheme remains same.

4.6 ASSET MANAGEMENT COMPANIES IN INDIA

In recent years, the asset management industry is organised and reshaped. Many banks and insurance companies hived off or delegated their asset management business to licensed management companies *(COB Asset Management division, 2001, p.2)*. The asset management companies attracts competitors from an extraordinarily broad range of strategic groups—commercial and universal banks, investment banks, trust companies, insurance companies, private banks, and various types of specialist firms. The competitive resources and strategic objectives are likely to render the market for asset management industry a highly competitive one even under conditions of large size and rapid growth *(Walter, I., 1998, p.1)*. Figure 4.3 exhibits the classification of asset management companies in Indian context.

Figure-4.2 Classification of Asset Management Company



Source: AMFI Report

Bank Sponsored

Bank sponsored asset management companies consist of joint venture – predominantly Indian, joint venture – predominantly foreign and other segment.

Joint Venture- Predominantly Indian

1. BOI AXA Investment Managers Private Limited

BOI AXA Investment Managers Private Limited (previously known as Bharti AXA Investment Managers Private Limited), has been set up as a company under the Companies Act, 1956, and has its corporate office in Mumbai. The AMC has the regulatory approval to act as asset manager for the Fund vide SEBI's approval letter no OW/11676/2012 dated May 25, 2012, and was appointed as the investment manager of the Fund by the Trustee under Investment Management Agreement (IMA) as investment manager, the AMC performs a range of duties and activities, including to manage the assets of the Schemes. BOI AXA Investment Managers Private Limited is a joint venture between BOI and AXA Group represented by AXA Investment Managers.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
BOI	51
AXA investment managers Asia Holding Pvt. Ltd.	49

2. Canara Robeco Asset Management Company Ltd.

Canara Robeco Asset Management Company Ltd. (formerly known as Canbank Investment Management Services Ltd.) is a company incorporated under the Companies Act, 1956 on 2nd March, 1993, having its registered office in Mumbai. The company has been appointed as the Asset Management Company of the Canara Robeco Mutual Fund by the Trustees vide Investment Management Agreement (IMA) dated 16th June, 1993 and executed between Canara Robeco Mutual Fund (formerly Canbank Mutual Fund) and Canara Robeco Asset Management Company Ltd (formerly known as Canbank Investment Management Services Ltd.). The AMC was originally incorporated as Canbank Investment Management Services Ltd. under the Companies Act, 1956 on 2nd March, 1993 to manage the assets of Canbank Mutual Fund. Pursuant to the joint venture documents signed between Canara Bank and Robeco Groep N. V., Robeco India Holding B. V.(100 per cent subsidiary of Robeco GroepN. V.) on September 26, 2007 acquired 49 per cent stake in the AMC and Canara Bank retained the remaining 51 per cent. Consequent to this, the Fund was renamed as Canara Robeco Mutual Fund and the AMC was renamed as Canara Robeco Asset Management Company Ltd. The Schemes of the mutual fund have accordingly been renamed to reflect the joint venture.

3. SBI Funds Management Private Limited

SBI Funds Management Private Limited (SBIFMPL) is a private limited company incorporated under the Companies Act, 1956 on February 17, 1992. In terms of Investment Management Agreement, SBIFMPL has assumed the day to day investment management of the fund and in that capacity makes investment decisions and manages the SBI Mutual Fund Schemes in accordance with the scheme objectives, As per the audited accounts on March 31, 2013, the authorized and paid-up capital of the AMC was Rs. 50 crore and the Net worth of the AMC was Rs. 337.70 Crore. SBI Funds Management Pvt. Ltd. is one of the leading fund houses in the country with an investor base of over 4.58 million and over 25 years of rich

experience in fund management consistently delivering value to its investors. SBIFMPL is a joint venture between State Bank of India (SBI) and Amundi India Holding (AMUNDI), a leading European asset management company. AMUNDI shall provide strategic support to the Company. SBI & AMUNDI shall jointly develop the Company as an asset management company of international repute by adopting global best practices and maintaining international standards.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
SBI	63
AMUNDI	37

4. Union KBC Asset Management Company Private Limited

Union KBC Asset Management Company Private Limited is a company incorporated under the Companies Act, 1956 on December 30, 2009. Union KBC Asset Management Company Private Limited has been appointed as the Asset Management Company of Union KBC Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated December 2, 2010, and executed between Union KBC Trustee Company Private Limited and Union KBC Asset Management Company Private Limited.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Union Bank of India	51
KBC Participations Renta	49

Joint Venture- Predominantly Foreign

1. BOB Asset Management Company Ltd.

The AMC is a public limited company, which was incorporated under the Companies Act, 1956 on November 5, 1992 under the name, BOB Asset Management company Limited. The AMC's registered office is situated in Mumbai. The AMC was a wholly owned subsidiary of BOB, operating under the name, BOB Asset Management. Company Ltd. On June 27, 2008, Pioneer acquired a 51 per cent shareholding in BOB Asset Management Company Limited. Subsequently, the name of the AMC was changed to Baroda Pioneer Asset Management Company Limited and a fresh

Certificate of Incorporation was issued by the Registrar of Companies, Mumbai, Maharashtra, on July 8, 2008. In compliance of the requirement of the Regulations, 50 per cent of the Board of Directors of the AMC comprises independent directors and the remaining is nominated for appointment by the sponsors of the Mutual Fund.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Pioneer	51
BOB	49

Others

1. IDBI Asset Management Ltd.

IDBI Asset Management Ltd. is a public limited company incorporated under the Companies Act, 1956 on 25th January 2010, having its Registered Office in Mumbai. IDBI Asset Management Ltd. has been appointed as the Asset Management Company of the IDBI Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated 20th February 2010, and executed between IDBI MF Trustee Company and IDBI AMC. IDBI Asset Management Limited is a subsidiary of IDBI Bank Limited. The AMC is currently not undertaking any other business activity except being acting as Investment Manager for the schemes of IDBI Mutual Fund.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
IDBI Bank Ltd. & its Nominee Shareholders	55.56
IDBI Capital Market Services Ltd. (wholly owned subsidiary of IDBI Bank Ltd)	44.44

2. UTI Asset Management Company Private Limited

UTI Asset Management Company Private Limited was incorporated under the Companies Act, 1956 on November 14 2002. Subsequently, the status was changed to a Public Limited Company and the name of the Company was accordingly changed to UTI Asset Management Company Ltd by a Special Resolution passed at the Annual General Meeting on September 18, 2007. UTI AMC has been appointed as the Asset Management Company of the UTI Mutual Fund by the Investment Management Agreement (IMA) dated December 9, 2002 executed between UTI Trustee Company

Private Limited and UTI AMC. The Total paid up share capital of UTI AMC is Rs.125 crore. With effect from January 20 2010, the sponsors viz., State Bank of India, Bank of Baroda, Punjab National Bank and Life Insurance Corporation of India, which are also the shareholders of UTI AMC, have sold 26 per cent of their respective share holdings in UTI AMC in equal proportion to T, Rowe Price International Ltd, UK, a wholly owned subsidiary of T Rowe Price Group, Inc, as a strategic investor. T. Rowe Price Group, Inc. is a NASDAQ listed company, founded in 1937 the Baltimore, USA based T. Rowe Price Group, Inc. is a global investment management organization. After the sale, the sponsors/shareholders are, in equal proportion, holding in aggregate 74 per cent, and TRP is holding 26 per cent of the equity share capital of UTI AMC. The organization provides a broad array of mutual funds, sub-advisory services, and separate account management for financial intermediaries, individual and institutional investors, and retirement plans.

Institutions

Institution asset management companies are classified in Indian companies and joint venture- predominantly Indian company.

Indian

1. IIFCL Asset Management Company Limited

IIFCL Asset Management Company Limited (IAMCL) is a public limited company incorporated under the Companies Act, 1956 on 28th March 2012, having its Registered Office in New Delhi. IAMCL has been appointed as the Asset Management Company (AMC) of the IIFCL Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated 7th August 2012, and executed between the Board of Trustees of IIFCL Mutual Fund and IIFCL Asset Management Company Limited. IAMCL has also been granted the approval from SEBI to act as the asset management company of IIFCL – Mutual Fund (IDF).

Joint Venture- Predominantly Indian

1. LIC Nomura Mutual Fund Asset Management Company Ltd.

LIC NOMURA Mutual Fund Asset Management Company Ltd. (AMC) is a public limited company incorporated under the Companies Act, 1956 in 20th April, 1994, having its Registered Office in Mumbai. LIC NOMURA Mutual Fund Asset Management Company Ltd. has been appointed as the Asset Management Company of the LIC NOMURA Mutual Fund by the Trustee vide Investment Management Agreement (IMA) and executed between LIC NOMURA Mutual Fund Trustee

Company Private Ltd. and LIC NOMURA Mutual Fund Asset Management Company Ltd.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Life Insurance Corporation of India	45
Nomura Asset Management Strategic Investments Pvt. Ltd.	35
LIC Housing Finance Ltd.	20

Private Sector

The private sector is the dominated part of the asset management industry which further divided in Indian companies, foreign companies, joint venture- predominantly Indian companies and joint venture- predominantly foreign.

Indian

1. Deutsche Asset Management (India) Private Ltd

Deutsche Asset Management (India) Private Ltd. (DeAM India) has been appointed as the Asset Management Company of the Mutual Fund by the Trustees vide its Investment Management Agreement (IMA) dated May 29, 2002 executed between the AMC and the Trustee Company. The Asset Management Company is a private limited company incorporated under the Companies Act, 1956 on March 21, 2002. The head office and the registered office of DeAM India is in Mumbai. The Asset Management Company was approved to act as the Asset Management Company for the Mutual Fund by SEBI on October 28, 2002.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Deutsche India Holdings Private Limited	100

2. Edelweiss Asset Management Limited

Edelweiss Asset Management Limited was incorporated as a Private Limited Company under the Companies Act, 1956 on August 23, 2007 and was converted into Public Limited Company on January 18, 2008. Asset Management Limited has been appointed as the Asset Management Company of Edelweiss Mutual Fund by the Trustee Company vide Investment Management Agreement (IMA) dated January 30, 2008, and executed between Edelweiss Trusteeship Company Limited and Edelweiss

Asset Management Limited. The AMC has also been granted a certificate of registration as a Portfolio Manager with SEBI. The AMC has commenced the activity of providing portfolio management services since May 2012. The AMC has no conflict of interest between its Mutual Fund and Portfolio Management Services business. Edelweiss Asset Management Limited is a wholly owned subsidiary of Edelweiss Financial Services Limited (formerly Edelweiss Capital Limited), the Sponsor. The substantial part of the paid-up capital of Edelweiss Asset Management Limited is held by Edelweiss Financial Services Limited & through its Nominees.

3. Escorts Asset Management Ltd.

Escorts Asset Management Ltd. is a public limited company incorporated under the Companies Act, 1956 on 01.12.1995, having its Registered Office in New Delhi. Escorts Asset Management Ltd. has been appointed as the Asset Management Company of the Escorts Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated 15th April 1996, and executed between Escorts Investment Trust Ltd. and Escorts Asset Management Ltd.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Escotrs Finance Ltd.	49
Escorts Ltd.	30
AAA Portfolios Pvt. Ltd.	21

4. IL&FS Infra Asset Management Limited

IL&FS Infra Asset Management Limited (IIAML) is a Public Limited Company incorporated under the Companies Act, 1956 on January 8, 2013. IL&FS AMC Trustee Limited (Trustee Company) and IL&FS Infra Asset Management Limited (IIAML) have executed the Investment Management Agreement (IMA) on January 21, 2013 whereby the Trustee Company appointed IIAML as the Asset Management Company of the IL&FS Infrastructure Debt Fund(IDF). This IMA was Amended and Restated on September 5, 2013 between the Trustee Company and IIAML. IIAML is a subsidiary of IL&FS Financial Services Limited. IL&FS Financial Services Limited along with 7 nominee shareholders holds 91.80 per cent and LIC of India holds 8.20 per cent of IIAML's share capital.

5. India Infoline Asset Management Company Ltd.

India Infoline Asset Management Company Ltd. (AMC) is a public limited company incorporated under the Companies Act, 1956 on March 22, 2010, having its Registered Office in Mumbai. India Infoline Asset Management Company Ltd. has been appointed as the Investment Manager to IIFL Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated April 29, 2010, executed between India Infoline Trustee Company Ltd. and India Infoline Asset Management Company Ltd. The paid-up capital of the AMC is Rs. 18,50,00,000 comprising of 1,85,00,000 of Equity Shares of Rs. 10 each.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
IIFL Wealth Management Limited	100

6. Indiabulls Asset Management Company Limited

Indiabulls Asset Management Company Limited (IBAMC) was incorporated under the Companies Act, 1956 on April 10, 2008 having its registered office in New Delhi. Indiabulls Asset Management Company Limited has been appointed as the Asset Management Company of Indiabulls Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated November 07, 2008, executed between the Trustee and the Asset Management Company.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Indiabulls Housing Finance Ltd.	100

7. JM Financial Asset Management Ltd.

JM Financial Asset Management Ltd. (formerly known as J. M. Capital Management Pvt. Ltd.) is a public limited company incorporated under the Companies Act, 1956 on 9th June, 1994, having its registered office in Mumbai. JM Financial Asset Management Ltd. has been appointed as the Asset Management Company of the JM Financial Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated 1st September, 1994 and executed between JM Financial Trustee Company Pvt. Ltd and JM Financial Asset Management Ltd. The AMC has received approval from SEBI for undertaking portfolio Management and has been granted a

Certificate of registration by SEBI under the SEBI (portfolio Managers) regulations, 1993.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
JM Financial Ltd.	53.47
J.M. Financial & Investment Consultancy Services pvt. Ltd.	25.75
Others	20.78

8. Kotak Mahindra Asset Management Company Limited

Kotak Mahindra Asset Management Company Limited (AMC) is a public limited company incorporated under the Companies Act, 1956 on August 2, 1994. Kotak Mahindra Asset Management Company Limited has been appointed as the Asset Management Company of the Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated May 20, 1996, as amended up to date, and executed between the Trustee and the AMC. Kotak Mahindra Asset Management Company Limited is a wholly owned subsidiary of the Sponsor, Kotak Bank. An approval by the Division of Funds, Investment Management Department under the SEBI (Portfolio Manager) Regulations, 1993 and Mutual Funds Division of SEBI under the SEBI ('Mutual Funds') Regulations, 1996, has been granted to the AMC for undertaking Portfolio Management Service (PMS).

9. L&T Investment Management Limited

L&T Investment Management Limited is a limited company incorporated under the Companies Act, 1956 on April 25, 1996. L&T Investment Management Limited has been appointed as the Asset Management Company of the L&T Mutual Fund by L&T Mutual Fund Trustee Limited vide Investment Management Agreement and executed between L&T Mutual Fund Trustee Limited and L&T Investment Management Limited. L&T Finance Holdings Limited (along with its nominees) holds 100 per cent of the share capital of the AMC.

10. Motilal Oswal Asset Management Company Ltd.

Motilal Oswal Asset Management Company Ltd. (AMC) is public a limited company incorporated under the Companies Act, 1956 on November 14, 2008. Motilal Oswal Asset Management Company Ltd. has been appointed as the Investment Manager to Motilal Oswal Mutual Fund vide Investment Management Agreement, executed

between Motilal Oswal Trustee Company Ltd. and Motilal Oswal Asset Management Company Ltd. The AMC is also registered with SEBI under SEBI (Portfolio Managers) Regulations, 1993. Apart from the above-mentioned activities, the AMC may undertake any other business activities including activities in the nature of management and advisory services to offshore funds, financial consultancy and exchange of research on commercial basis etc, subject to receipt of necessary regulatory approvals and approval of Trustees. The AMC shall ensure that such activities are not in conflict with the activities of the mutual fund.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Motilal Oswal Securities Limited	100

11. Peerless Funds Management Company Limited

Peerless Funds Management Company Limited (PFMCL) is a public limited company incorporated under the Companies Act, 1956 on 9th April, 2009. Peerless Funds Management Company Limited has been appointed as the Investment Manager of the Peerless Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated, 11th August 2009, and executed between the Trustee and the AMC.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
The Peerless General Finance & Investment Co. Ltd(PGFI)	99.99
Individual	00.01

12. PPFAS Asset Management Private Limited

PPFAS Asset Management Private Limited is incorporated as a private limited under the Companies Act, 1956 on 8th August 2011. PPFAS Asset Management Private Limited has been appointed as the investment managers of PPFAS Mutual Fund by the Trustee vide Investment Management Agreement (IMA), executed between the Trustee and the Asset Management Company.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Parag Parikh Financial Advisory Services Limited	100

13. Quantum Asset Management Company Private Limited

Quantum Asset Management Company Private Limited (the AMC) is a private limited company incorporated under the Companies Act, 1956 on September 19, 2005. The AMC has been appointed as the Asset Management Company of the Quantum Mutual Fund by the Trustee vide Investment Management Agreement (IMA) and executed between the Trustee and the AMC. The AMC is a wholly owned subsidiary of the Sponsor.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Quantum Advisors Private Limited	100

14. Reliance Capital Asset Management Limited

Reliance Capital Asset Management Limited (RCAM) is an unlisted Public Limited Company incorporated under the Companies Act, 1956 on February 24, 1995, having its registered office in Mumbai. RCAM is a subsidiary of RCL. RCAM has been appointed as an Asset Manager of Reliance Mutual Fund by the Trustee i.e. RCTC, vide Investment Management Agreement (IMA). The IMA has been executed between RCTC and RCAM and has since been amended on August 12, 1997, on January 20, 2004 and then on February 17, 2011. RCAM is a subsidiary of RCL. Presently, RCL holds 65.23 per cent of its total issued and paid-up equity share capital and the balance of its issued and paid up equity share capital is held by other shareholders which includes Nippon Life Insurance Company (NLI), holding 26 per cent of RCAM's total issued and paid up equity share capital. NLI acquired the said 26 per cent share holding in RCAM on August 17, 2012. The net worth of the AMC based on unaudited financial statements as on December 31, 2013 is Rs. 1438.13 crore (market value).

15. Sahara Asset Management Company Private Limited

Sahara Asset Management Company Private Limited (Formerly known as First India Asset Management Company Limited) is a Private Limited Company incorporated under the Companies Act, 1956 on August 31, 1995. Sahara Asset Management Company Private Limited has been appointed as the Asset Management Company of the Sahara Mutual Fund by the Trustee vide Investment Management Agreement (IMA) and executed between the Board of Trustees and Sahara Asset Management

Company Private Limited (Formerly known as First India Asset Management Company Limited). The Trustees has appointed Sahara Asset Management Company Private Limited to manage the Mutual Fund. The Share holding pattern of the AMC as on 31st March 2013 is as mentioned below:

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Sahara India Financial Corporation Limited	40.12
Sahara Care Limited (SCL)	27.88
Others	32.00

16. Shri Ram Asset Management Company Limited

Shri Ram Asset Management Company Limited, a company incorporated under the Companies act, 1956 on July 27, 1994, having its registered office in Mumbai is the Asset Management Company of Shri Ram mutual fund. It had been appointed as the investment managers of the mutual fund vide an investment agreement.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Shri Ram Credit Company Limited	42.67
Public Shareholding	57.33

17. Sundaram Asset Management Company Limited

Sundaram Asset Management Company Limited is a public limited company incorporated under the Companies Act, 1956 on February 26, 1996. Sundaram Asset Management Company Limited has been appointed as the Investment Manager for Sundaram Mutual Fund by the Trustee vide Investment Management Agreement dated August 24, 1996. The business activity of the company involve-

- Investment Manager for Sundaram Mutual Fund
- Investment Management & Advisory services
- Portfolio Management Services

18. TATA Asset Management Ltd

Tata Asset Management Ltd (TAML) is a company incorporated under the Companies Act, 1956 on 15th March, 1994, TAML has been appointed as the Asset Management Company for Tata Mutual Fund by the Trustee vide Investment

Management Agreement (IMA) dated 9th May, 1995, and executed between TTCL and TAML. The net worth of TAML as on October 31, 2013 is approximately about Rs. 162.07 crore. TAML is currently managing thirty eight open ended schemes and twenty six close ended schemes. The AMC has systems in place to ensure that there is no conflict of interest between the aforesaid activities. This includes:

- Segregation of key investment personnel
- Segregation of bank and securities account
- Restriction on transfer of securities
- Activity wise order execution and confirmation

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Tata Sons Ltd	67.91
Tata Investment Corporation Ltd	32.09

19. Taurus Asset Management Company Limited

Taurus Asset Management Company Limited (TAMCO) is a public limited company incorporated under the Companies Act, 1956 on July 27, 1993. TAMCO has been appointed as the Asset Management Company of the Taurus Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated August 20, 1993 executed between Taurus Investment Trust Company Limited and Taurus Asset Management Company Limited.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
HB Portfolio Ltd.	50.00
RRB Securities Ltd.	29.88
Others	20.12

FOREIGN

1. BNP Paribas Asset Management India Private Limited

BNP Paribas Asset Management India Private Limited is a private limited company incorporated under the Companies Act, 1956, having its Registered Office in Mumbai. The paid-up equity share capital of the AMC of Rs. 2,10,96,75,000 is held by BNP Paribas Investment Partners Asia Limited along with its two nominee

shareholders. BNP Paribas Asset Management India Private Limited has been appointed as Asset Management Company of BNP Paribas Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated February 15, 2011 executed between BNP Paribas Trustee India Private Limited and BNP Paribas Asset Management India Private Limited.

2. Franklin Templeton Asset Management (India) Private Limited

Franklin Templeton Asset Management (India) Private Limited has been appointed as the Asset Management Company of the Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated January 5, 1996, executed between Franklin Templeton Trustee Services Pvt. Ltd and Franklin Templeton Asset Management (India) Pvt. Ltd., as amended by the Supplemental Investment Management Agreement dated August 26, 2005. The Investment Manager was approved by SEBI to act as the asset management company (AMC) for the Mutual Fund. Franklin Templeton Asset Management (India) Private Limited is a private company limited by shares incorporated under the Companies Act, 1956 on October 6, 1995. The entire (100 per cent) paid up capital of the Investment Manager is held by Franklin Templeton Holding Ltd., Mauritius and its nominees. Franklin Templeton Holding Ltd. is a wholly owned subsidiary of Franklin Templeton Asia Holdings Pte. Ltd., Singapore.

3. **Goldman Sachs Asset Management (India) Private Limited**

Goldman Sachs Asset Management (India) Private Limited is a private limited company incorporated under the Companies Act, 1956 on March 10, 2008, having its registered office in Mumbai. The AMC has been appointed as the investment manager of the Mutual Fund by the Trustee Company pursuant to the Investment Management Agreement (IMA) dated April 30, 2008, and executed between the Trustee Company and the AMC. SEBI approved the AMC to act as the investment manager of the Fund since September 1, 2008.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
GSAM India Holdings Limited (a wholly owned subsidiary of Goldman Sachs Asset Management)	100

4. Mirae Asset Global Investments (India) Private Limited

Mirae Asset Global Investments (India) Private Limited, a company registered under the Companies Act, 1956. Mirae Asset Global Investments (India) Private Limited has been appointed as the Asset Management Company of Mirae Asset Mutual Fund by the Trustee vide Investment Management Agreement dated October 11, 2007 entered into between Mirae Asset Trustee Company Private Limited and Mirae Asset Global Investments (India) Private Limited.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Mirae Asset Global Investments Co. Ltd. (MAGI), Korea	99.99
Mr. Jisang Yoo	00.01

5. Morgan Stanley Investment Management Private Limited

Morgan Stanley Investment Management Private Limited is a private limited company incorporated under the Companies Act, 1956 on October 12, 1993, having its Registered Office in Mumbai. Morgan Stanley Investment Management Private Limited has been appointed as the Asset Management Company of Morgan Stanley Mutual Fund by the Board of Trustees vide Investment Management Agreement (IMA) dated November 3, 1993 and executed between the Board of Trustees and Morgan Stanley Investment Management Private Limited.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Morgan Stanley Dean Witter Mauritius Company Limited	74.99
Alanoushka Finlease and Investments Private Limited and others	25.01

6. Pinebridge Investments Asset Management Company

PineBridge Investments Asset Management Company (India) Private Limited (earlier known as AIG Global Asset Management Company is a private limited company incorporated under the Companies Act, 1956 on October 30, 2006. The AMC has been appointed as the asset management company of PineBridge Mutual Fund by the Trustee vide Investment Management Agreement, executed between the Trustee and the AMC. The Investment Management Agreement has been amended by the Trustee

and the AMC by executing the First Amendment to the Investment Management Agreement dated November 28, 2012.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
PineBridge Investments Capital India Private Limited	99.99
PineBridge Investments Japan Co., Ltd.	00.01

7. Pramerica Asset Managers Private Limited

Pramerica Asset Managers Private Limited, a private limited company incorporated under the Companies Act, 1956. Further, the AMC has the regulatory approval to act as asset manager for the Fund by SEBI on May 13, 2010 and has been appointed as the Asset Management Company of Pramerica Mutual Fund by Pramerica Trustees Private Limited, executed between the Trustee and the AMC. The AMC is a wholly owned 'step-down' subsidiaries of PFI , the Sponsor of Pramerica Mutual Fund, through one of its wholly owned 'step-down' subsidiaries, namely, PGLH of Delaware, Inc.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
PGLH of Delaware, Inc	100

Joint Venture- Predominantly Indian

1. Axis Asset Management Company Limited

Axis Asset Management Company Limited (AMC) is a public limited company incorporated under the Companies Act, 1956 on January 13, 2009, having its Registered Office in Mumbai. Axis Asset Management Company Limited has been appointed as the Investment Manager of the Axis Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated June 27, 2009, and executed between the Trustee and the AMC. Axis Asset Management Co. Ltd. is a subsidiary of Axis Bank.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Axis Bank Limited and its nominees	74.99
Schroder Singapore Holdings Private Limited	25.00

2. Birla Sun Life Asset Management Company Ltd.

Birla Sun Life Asset Management Company Ltd. (BSLAMC), is a public limited company incorporated under the Companies Act, 1956 on September 05, 1994 having its Registered Office in Mumbai. BSLAMC has been appointed as the Investment Manager of Birla Sun Life Mutual Fund by the Trustee vide Investment Management Agreement dated December 16, 1994, executed between Birla Sun Life Trustee Company Pvt. Ltd. & Birla Sun Life Asset Management Co. Ltd.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Aditya Birla Financial Services Pvt. Ltd & others	51
Sun Life (india) AMC Investment Inc	49

3. DSP Blackrock Investment Managers Pvt. Ltd.

DSP BlackRock Investment Managers Pvt. Ltd. is a company incorporated under the Companies Act, 1956 on May 13, 1996, having its registered office at in Mumbai. The AMC has been appointed as the asset management company to the Mutual Fund by the Trustee, vide Investment Management Agreement (IMA) dated December 16, 1996, and executed between the Trustee and the AMC. The AMC offers non-binding investment advisory services to BlackRock India Equities Fund (Mauritius) Limited and BlackRock Asset Management North Asia Limited for investment in Indian securities in terms of approval granted by SEBI. The AMC also offers investment advisory services to DSP BlackRock Investment Managers (Mauritius) Limited, a wholly owned subsidiary of the AMC, which is an asset management company to an offshore fund based in Mauritius.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
DSP ADIKO Holdings Pvt. Ltd.	60
BlackRock Advisors Singapore Pte. Ltd.	40

4. HDFC Asset Management Company

HDFC Asset Management Company Limited is a public limited company incorporated under the Companies Act, 1956 on December 10, 1999, having its Registered Office in Mumbai. HDFC Asset Management Company Limited has been

ppointed as the Asset Management Company of HDFC Mutual Fund by the Trustee ide Investment Management Agreement (IMA) dated June 8, 2000, and executed etween HDFC Trustee Company Limited and HDFC Asset Management Company imited. In terms of the Investment Management Agreement, the Trustee has ppointed HDFC Asset Management Company Limited to manage the Mutual Fund. he paid-up capital of the AMC is Rs. 25.24 crore as on March 31, 2013.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Housing Development Finance Corporation Limited	59.81
Standard Life Investments Limited	39.87
Other Shareholders (shares issued on exercise of stock options)	0.32

. ICICI Prudential Asset Management Company Limited

CICI Prudential Asset Management Company Limited, a company incorporated nder the Companies Act, 1956 on June 22, 1993 having its Registered Office in New)elhi. The AMC has been appointed as the Asset Management Company of the ICICI 'rudential Mutual Fund by the Trustee vide Investment Management Agreement lated September 03, 1993 executed between ICICI Prudential Trust Ltd. and ICICI 'rudential Asset Management Company Ltd. The AMC is also engaged in portfolio nanagement services (PMS) since October 2000. The AMC is also rendering \dvisory Services to SEBI registered foreign institutional investors (FIIs) and their ub-accounts. The AMC has received approval from SEBI to act as the investment nanager to the funds launched under SEBI (Alternative Investment Funds) Regulations, 2012. ICICI Bank Ltd. holds 51 per cent of the share capital of the AMC nd Prudential plc, through its wholly owned subsidiary, Prudential Corporation Holdings Ltd., holds 49 per cent.

5. IDFC Asset Management Company Limited

IDFC Asset Management Company Limited (which was earlier known as IDFC Asset Management Company Private Limited), a company incorporated under the Companies Act, 1956 on May 27th 2008, having its Registered Office in Mumbai, is he Asset Management Company of IDFC Mutual Fund. It had been appointed as the nvestment manager of the mutual fund vide a deed of variation to the Investment Management Agreement. The Deed of variation to the IMA was entered into between

IDFC Asset Management Company Limited and IDFC AMC Trustee Company Limited. The Company originally known as ANZ Grindlays Asset Management Company Private Limited, was established by Australia and New Zealand Banking Group (ANZ), and had been appointed by the Trustee to act as the Investment Manager of the ANZ Grindlays Mutual Fund vide the Investment Management Agreement dated January 3, 2000. Consequent to sale of business by ANZ to Standard Chartered Bank (SCB) in 2001, 75 per cent stake in the equity share capital of the AMC and 100 per cent stake in the Preference Share Capital of the AMC had been transferred to SCB. IDFC acquired the equity and preference shares held by SCB in the Asset Management Company Private Limited (AMC) on May 30th 2008. IDFC also acquired the equity shares held by minority shareholders in the AMC.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
IDFC / persons / entities nominated by IDFC	74.99
Natixis Global Asset Management Asia Pte. Ltd.	25.01

7. Religare Invesco Asset Management Company Private Limited

Religare Invesco Asset Management Company Private Limited (earlier known as Religare Asset Management Company Private Limited) is incorporated under the Companies Act, 1956 on May 20, 2005. The AMC has been appointed as the Asset Management Company of the Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated April 27, 2006 and executed between the Trustee and the AMC. The IMA has been amended by the first Amendment to IMA dated March 28, 2013.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Religare Securities Limited and its nominees	51
Invesco Hong Kong Limited	49

Joint Venture- Predominantly Foreign

1. HSBC Asset Management (India) Private Limited

HSBC Asset Management (India) Private Limited is a private limited company incorporated under the Companies Act, 1956 on December 12, 2001 having its

Registered in Mumbai. HSBC Asset Management (India) Private Limited has been appointed as the Asset Management Company of the Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated February 7, 2002 and executed between the Trustees and the AMC. SEBI approved the AMC to act as the Investment Manager of the Fund vide. The paid-up equity share capital of the AMC is Rs. 54.2 crore. HSBC Securities and Capital Markets (India) Private Limited holds 100 per cent of the paid-up equity share capital of the AMC. The paid-up equity share capital of the AMC is Rs. 54.2 crore. HSBC Securities and Capital Markets (India) Private Limited holds 100 per cent of the paid-up equity share capital of the AMC.

2. ING Investment Management (India) Private Limited

ING Investment Management (India) Private Limited is a private limited company incorporated under the Companies Act, 1956 on April 06, 1998, having its Registered Office in Mumbai. ING Investment Management (India) Private Limited has been appointed as the Asset Management Company of the Fund by the Board of Trustees vide Investment Management Agreement (IMA) dated October 28, 1998, and executed between the AMC and the Fund. The AMC also proposes to undertake other business activities as permitted under the SEBI Regulations such as portfolio management services, management and advisory services to offshore funds, pension funds, provident funds, venture capital funds, management of insurance funds, financial consultancy and exchange of research on commercial basis and such other activities as may be permitted by SEBI from time to time and subject to conditions stipulated by the Trustees and the applicable laws/rules/regulations (including, without limitation, the SEBI Regulations).

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Nationale Nederlanden Interfinance B.V. (an ING Group Company)	47.25
Hathway Investments Private Limited	39.75
Kirti Equities Private Limited	13

3. JP MORGAN ASSET MANAGEMENT INDIA PRIVATE LIMITED

The JP Morgan Asset Management India Private Limited is a private limited company incorporated under the Companies Act, 1956 on September 20, 2006. The AMC has

so been appointed as the asset management company of the Mutual Fund by the Trustee and the AMC and the Trustee have executed the Investment Management Agreement dated December 6, 2006 setting out the functions, duties and obligations of the AMC in relation to the Mutual Fund.

4. Principal PNB Asset Management Company Private Limited

Principal PNB Asset Management Company Private Limited (AMC) is a private limited company incorporated under the Companies Act, 1956 on November 20. India. Principal PNB Asset Management Company Private Limited has been appointed as the Asset Management Company of the Principal Mutual Fund by the Trustee vide Investment Management Agreement (IMA) dated November 25, 1994 executed between Trustee and AMC. Besides the offering and management of Schemes of Principal Mutual Fund, the AMC may undertake activities in the nature of management and advisory services to offshore funds, pension funds, provident funds, venture capital funds, management of insurance funds, financial consultancy and exchange of research on commercial basis if any of such activities are not in conflict with the activities of the mutual fund in line with SEBI (Mutual Funds) Regulations, 1996.

Shareholding of the AMC

Name of the Shareholders	Holding (%)
Principal Financial Group (Mauritius) Limited	68.43
Punjab National Bank	27.35
Vijaya Bank	4.22

Table - 4.1 AUM of Asset Management Companies in India

(Rs. in Crore)

SR. NO.	NAME OF THE ASSET MANAGEMENT COMPANY	AVERAGE AUM	SHARE IN INDUSTRY (%)
A	**BANK SPONSORED**		
I	**JV- Predominantly Indian**		
1	BOI AXA Managers Pvt Ltd.	1991	0.22
2	Canara Robeco Asset Management Co. Ltd	6499	0.72
3	SBI Fund Management Private Ltd.	65499	7.24
4	Union KBC Asset Management Company Pvt Ltd	2847	0.31
	Total- i	**76836**	**8.49**
Ii	**JV- Predominantly Foreign**		
1	Baroda Pioneer Asset Management Company Ltd.	8106	0.90
	Total- ii	**8106**	**0.90**
Iii	**Others**		
1	IDBI Asset Management Limited	5929	0.66
2	UTI Asset Management Limited	74233	8.20
	Total- iii	**80162**	**8.86**
	Total -A (i+ii+iii)	**165104**	**18.24**
B	**INSTITUTIONS**		
I	**Indian**		
1	IIFCL Asset Management Co. Ltd.	168	0.02
	Total –i	**168**	**0.02**
Ii	**Joint Venture- Predominantly Indian**		
1	LIC NORUMA Mutual Fund Asset Management Co. Ltd.	10584	1.17
	Total –ii	**10584**	**1.17**
	Total B -(i+ii)	**10752**	**1.19**

C	PRIVATE SECTOR		
I	**Indian**		
1	Deutsche Asset Management (India) Private Ltd.	18795	2.08
2	Edelweiss Asset Management Limited	169	0.02
3	Escorts Asset Management Ltd.	269	0.03
4	IL&FS Infra Asset Management Limited	415	0.05
5	India Infoline Asset Management Co. Ltd.	234	0.03
6	Indiabulls Asset Management Company Ltd	1097	0.12
7	J.M. Financial Asset Management Private Ltd.	6046	0.67
8	Kotak Mahindra Asset Management Co. Ltd	33079	3.65
9	L&T Investment Management Limited	18255	2.02
10	MotilalOswal Asset Management Co. Ltd.	489	0.05
11	Peerless Funds Management Co. Ltd.	4046	0.45
12	PPFAS Asset Management Pvt. Ltd	340	0.04
13	Quantum Asset Management Co. Private Ltd.	356	0.04
14	Reliance Capital Asset Management Ltd.	103542	11.44
15	Sahara Asset Management Co. Private Ltd.	191	0.02
16	Shriram Asset Management Co. Ltd.	24	0.00
17	Sundaram Asset Management Company Limited	16422	1.81
18	Tata Asset Management Ltd.	21594	2.39
19	Taurus Asset Management Co. Ltd.	3523	0.39
	Total- i	**229255**	**25.33**
Ii	**Foreign**		
1	BNP Paribas Asset Management India Private Limited	3446	0.38
2	Franklin Templeton Asset Management (India) Private Ltd.	45404	5.02
3	Goldman Sachs Asset Management (India) Private Limited	3764	0.42

4	Mirae Asset Global Investments (India) Private Ltd.	692	0.08
5	Morgan Stanley Investment Management Private Ltd.	2572	0.28
6	PineBridge Investments Asset Management Company (India) Pvt. Ltd	649	0.07
7	Pramerica Asset Managers Private Limited	2411	0.27
	Total- ii	**58938**	**6.51**
Iii	**JV- Predominantly Indian**		
1	Axis Asset Management Company Ltd	16154	1.78
2	Birla Sun Life Asset Management Co. Ltd.	89051	9.84
3	DSP BlackRock Investment Managers Ltd.	31631	3.49
4	HDFC Asset Management Co. Ltd.	112963	12.48
5	ICICI Prudential Asset Management Co. Ltd.	106822	11.80
6	IDFC Asset Management Company Private Limited	41349	4.57
7	Religare Invesco Asset Management Company Private Limited	14496	1.60
	Total- iii	**412466**	45.57
Iv	**JV- Predominantly Foreign**		0.00
1	HSBC Asset Management (India) Private Ltd	7659	0.85
2	ING Investment Management (India) Private Ltd	564	0.06
3	JP Morgan Asset Management (India) Private Ltd.	16248	1.80
4	Principal Pnb Asset Management Co.Private Ltd	4134	0.46
	Total- iv	**28605**	3.16
	Total C (i+ii+iii+iv)	**729264**	**80.57**
	Total (A+B+C)	***905120***	**100.00**

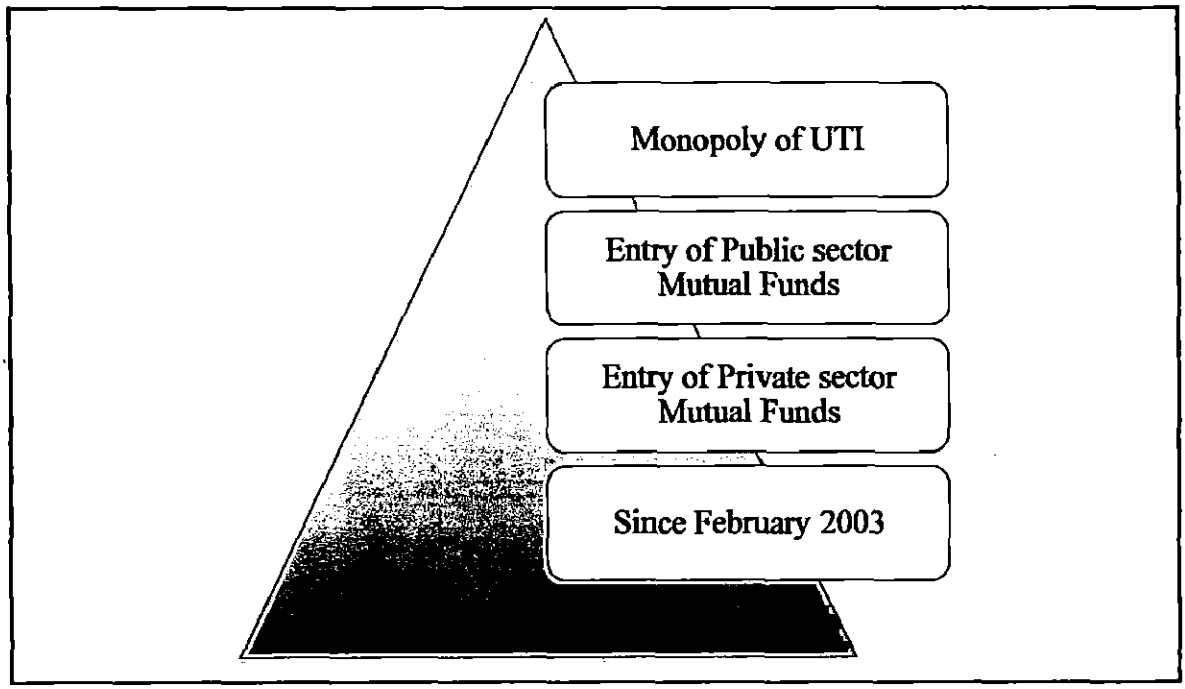
Source: Association of Mutual Funds in India. (2014)[2].
(Note- AUM at the end of March 2014)

According to the report of AMFI, asset management industry is growing by 10.83 per cent in comparison with previous year 2012-13. The private sector asset management companies are playing a vital role in the uptrend of industry. The HDFC Asset Management Co. Ltd. lead the asset management industry, accounted for 12.48 per cent share along with Rs. 112963 crore of AUM in the industry, followed by ICICI Prudential Asset Management Co. Ltd. (11.8 per cent), Reliance Capital Asset Management Ltd. (11.44 per cent) and Birla Sun Life Asset Management Co. Ltd. (9.84 per cent) at the end of March 2014. These five private sector companies contribute approximately 46 per cent of the total asset under management. The UTI Asset Management Limited with a share of 8.20 per cent is the leading public sector (combining Bank sponsored and Institution) followed by SBI Fund Management Private Ltd with a share of 7.24 per cent. The Franklin Templeton Asset Management (India) Private Ltd. (Foreign based entity) holds Rs. 45404 crore of assets having 5.02 per cent share in the asset under management of the industry.

4.7 GROWTH OF THE ASSET MANAGEMENT COMPANIES IN INDIA

The asset management company refers to professional fund management industry. Whenever individual/retail investors pool together their resources and allow a professional fund manager to invest it, the exercise can be considered to be part of this industry. It does not need to necessarily involve pooling of funds, professional management of the assets of High Networth Individuals (HNI) may also be considered part of this industry *(Chakrabarti R., n.d, p.2)*.The asset management industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Government of India and Reserve Bank of India. The history of mutual funds in India can be broadly divided into four distinct phases *(Association of Mutual Funds in India, n.d.)*.

Figure - 4.3 Phases of the Industry



Source: Association of Mutual Funds in India.

First Phase (July 1964 to November 1987)

The asset management industry in India has its origin in the 1963 Act of Parliament that led to the setting up of the Unit Trust of India (UTI) as an asset management company (AMC) to channel domestic savings, particularly that of a large number of small savers, to provide impetus to the country's industrial development *(Bose Suchismita, 2012, p.99)*. Unit Trust of India (UTI) was established in 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964.

Table-4.2 Growth of Asset under Management in First Phase

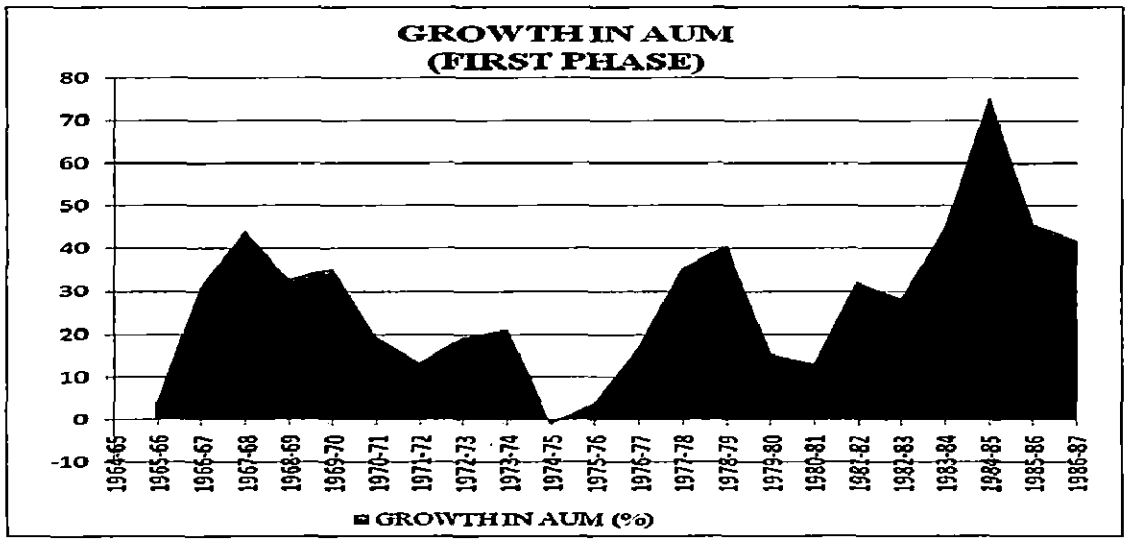
Year	No. of Scheme	AUM (Crore)	Growth in AUM (%)
1964-65	1	25	-
1965-66	1	26	4.00
1966-67	1	34	30.77
1967-68	1	49	44.12
1968-69	1	65	32.65
1969-70	1	88	35.38
1970-71	2	105	19.32
1971-72	2	119	13.33
1972-73	2	142	19.33

1973-74	2	172	21.13
1974-75	2	170	-1.16
1975-76	2	177	4.12
1976-77	2	207	16.95
1977-78	2	280	35.27
1978-79	2	394	40.71
1979-80	2	455	15.48
1980-81	3	514	12.97
1981-82	3	679	32.10
1982-83	4	870	28.13
1983-84	4	1261	44.94
1984-85	4	2210	75.26
1985-86	10	3218	45.61
1986-87	11	4564	41.83

Source: AMFI Reports &Lakhmi N. (2012).

It can be observed from table 4.2 that thirteen mutual fund schemes were launched during first phase which contribute for more than 4500 crore of assets under management. The industry had achieved remarkable growth is this phase as can be shown in graph 4.1, the industry touched continuously more than 40 per cent growth in the last the three year in first phase.

Graph - 4.1 Trends of AUM in First Phase



Source: AMFI Reports & Lakhmi N. (2012)

Second Phase (November 1987 to October 1993)

1987 marked the entry of non-UTI, public sector companies set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI Mutual Fund was the first non-UTI Mutual Fund established in June 1987 followed by Canbank Mutual Fund (Dec 87), Punjab

National Bank Mutual Fund (Aug 89), Indian Bank Mutual Fund (Nov 89), Bank of India (Jun 90), Bank of Baroda Mutual Fund (Oct 92). LIC established its mutual fund in June 1989 while GIC had set up its mutual fund in December 1990.

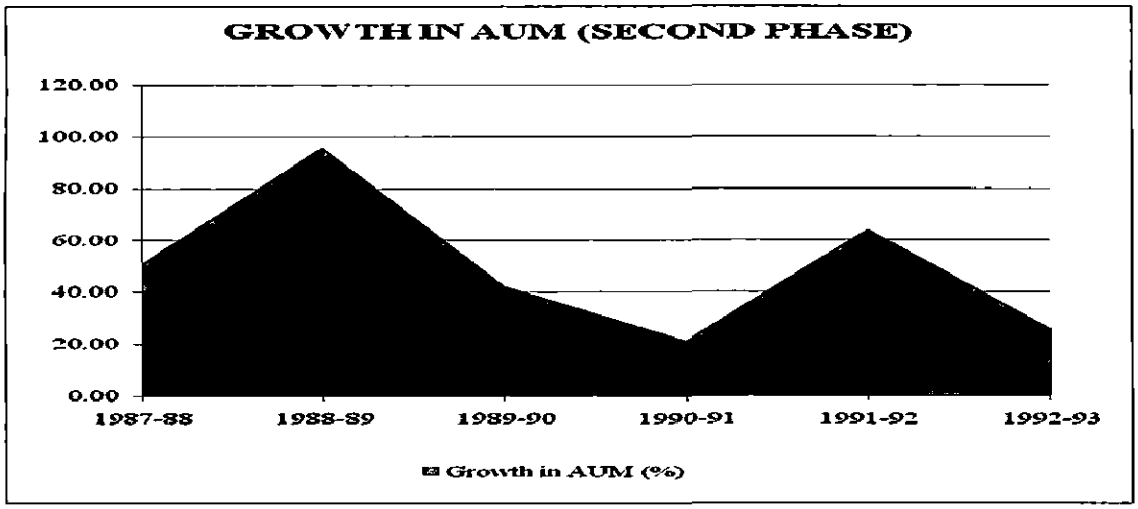
Table-4.3 Growth of Asset under Management in Second Phase

Year	No. of Scheme	AUM (Crore)	Growth in AUM (%)
1987-88	13	6871	50.55
1988-89	21	13456	95.84
1989-90	47	19131	42.17
1990-91	83	23161	21.07
1991-92	116	37973	63.95
1992-93	142	47734	25.71

Source: AMFI Reports & Lakhmi N. (2012).

At the end of 1992-93, the industry had assets under management of approximately Rs. 47,000crore and number of mutual fund schemes increased to 142. This phase had also witnessed the high rate of growth rate as can be seen in Graph- 4.2. The highest growth rate was achieved in 1988-89 when it touched 95.24 per cent.

Graph - 4.2 Trends of AUM in Second Phase



Source: AMFI Reports & Lakhmi N. (2012)

Third Phase (October 1993 to January 2003)

With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI were to be registered and governed. The erstwhile Kothari Pioneer (now merged with Franklin Templeton) was the first private sector mutual fund registered in July 1993.Foreign asset management companies too entered the mutual fund business through setting up domestic asset management companies

under joint-venture arrangement. In 1995, the RBI permitted private sector institutions to set up Money Market Mutual Funds (MMMFs), that could invest in treasury bills, call and notice money, commercial paper, commercial bills accepted/co-accepted by banks, certificates of deposit and dated government securities having unexpired maturity up to one year. *(Chakrabarti R., n.d, p.4).*

The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised Mutual Fund Regulations in 1996. The industry now functions under the SEBI (Mutual Fund) Regulations 1996. The number of mutual fund houses went on increasing, with many foreign mutual funds setting up funds in India and also the industry has witnessed several mergers and acquisitions.

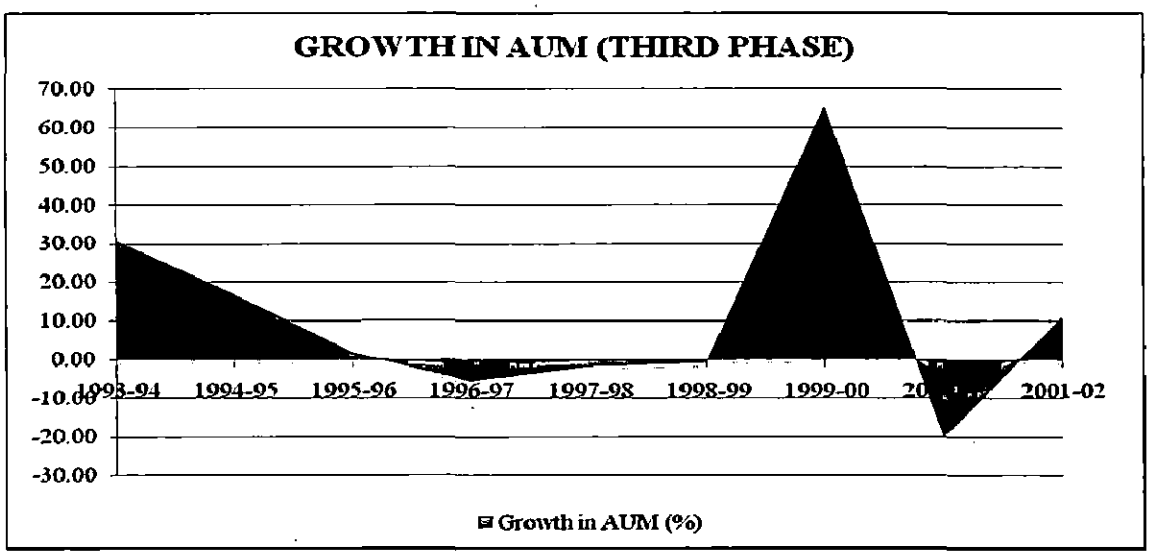
Table-4.4 Growth of Asset under Management in Third Phase

Year	No. of Scheme	AUM (Crore)	Growth in AUM (%)
1993-94	167	62430	30.79
1994-95	178	72967	16.88
1995-96	168	74315	1.85
1996-97	196	70197	-5.54
1997-98	235	68984	-1.73
1998-99	277	68472	-0.74
1999-00	337	113005	65.04
2000-01	393	90587	-19.84
2001-02	417	100594	11.05

Source: AMFI Reports & Lakhmi N. (2012).

As at the end of 2000-01, there were 417 mutual fund schemes with asset under management of Rs. 1,00594 crore. The industry witnessed mixed fortunes in this phase. It started with an increase growth rate of 30 per cent but faced to decline later on. There was a sharp decline of 19.15 per cent in the year 2000-01 but at the end of the phase, industry recovered slowdown and achieved a growth rate of 11 per cent. The Graph 4.3 depicts the trends of AUM in third phase.

Graph - 4.3 Trends of AUM in Third Phase



Source: AMFI Reports & Lakhmi N. (2012)

Fourth Phase (February 2003 and onwards)

In February 2003, following the repeal of the Unit Trust of India Act 1963 UTI was bifurcated into two separate entities. One was the Specified Undertaking of the Unit Trust of India with assets under management of Rs. 29,835 crore as at the end of January 2003, representing broadly, the assets of US 64 scheme. The Specified Undertaking of Unit Trust of India, functioning under an administrator and under the rules framed by Government of India and does not come under the purview of the Mutual Fund Regulations. The second was the UTI Mutual Fund, sponsored by SBI, PNB, BOB and LIC. It is registered with SEBI and functions under the Mutual Fund Regulations. With the bifurcation of the erstwhile UTI which had in March 2000 more than Rs. 76,000 crore of assets under management and with the setting up of a UTI Mutual Fund, conforming to the SEBI Mutual Fund Regulations, and with recent mergers taking place among different private sector funds, the mutual fund industry has entered the current phase with consolidation and growth.

Table- 4.5 Growth of Asset under Management in Forth Phase

Year	No. of Scheme	AUM (Crore)	Growth in AUM (%)
2002-03	382	79464	-21.01
2003-04	403	139616	75.70
2004-05	451	149600	7.15
2005-06	592	231862	54.98
2006-07	756	326388	40.77
2007-08	956	505152	54.77
2008-09	1001	417300	-17.39
2009-10	882	613979	47.13
2010-11	1131	700538	14.10
2011-12	1294	664792	-5.10
2012-13	1309	816657	22.84
2013-14	1638	905120	10.83

Source: AMFI Reports.

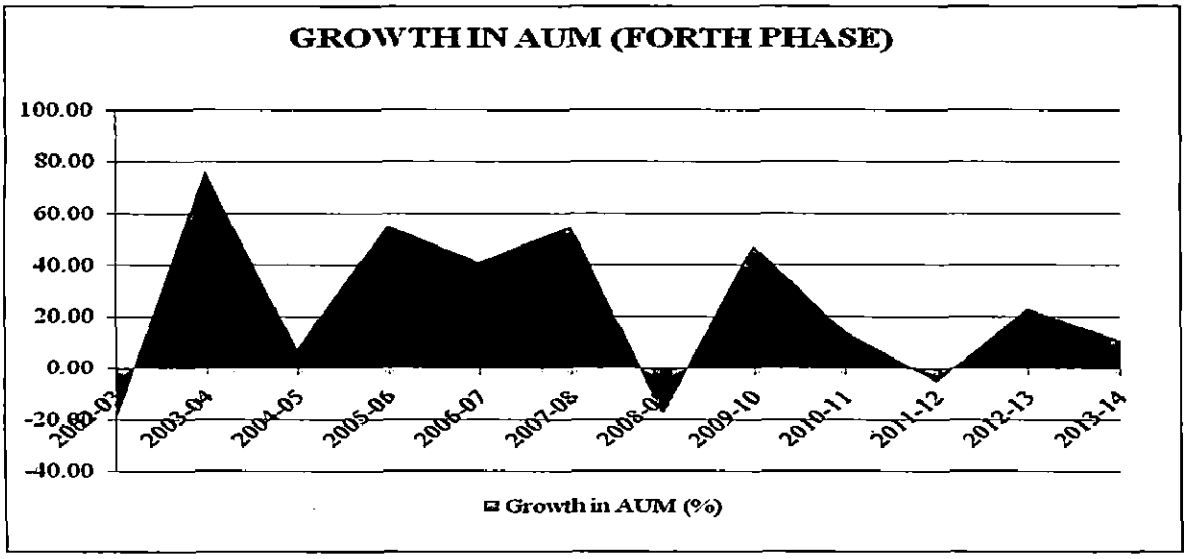
Erstwhile UTI was bifurcated into UTI Mutual Fund and the Specified Undertaking of the Unit Trust of India effective from February 2003. The Assets under management of the Specified Undertaking of the Unit Trust of India has therefore been excluded from the total assets of the industry as a whole from February 2003 onwards.

The Indian asset management industry is expected to record a compound annual growth rate of more than 20 per cent for the period of 2007 to 2013. While equity-linked savings schemes and equity funds are likely to record the highest growth, other segments of the market also have tremendous growth opportunities *(U.S. Commercial Service India., n.d., p.2)*. In this phase asset management industry is also effected by global financial crisis that unfolded in 2007 unsurprisingly had an impact both on the amount of savings and investment. With the drying up of credit inflows from banks and external commercial borrowings route, industry witnessed redemption pressure from corporate. The year 2008 will be etched in the history of financial markets though not in a good way. Big financial institutions collapsed, entire economies of countries were shaken and suddenly the world became a very different place. Against this backdrop, the Indian asset management industry suffered one of its worst periods as the US housing market crisis hit home *(Sridhar D. & Chadrashekhara G. 2010, p. 2)*.

During 2008-09, asset under management declined sharply by 17.9 per cent negatively to Rs. 417300 crore due to uncertain conditions prevailing in the domestic stock markets. The redemption pressures witnessed by mutual funds led to net

outflows under both the income/debt-oriented schemes and growth/equity-oriented schemes. Further, the AUM of asset management industry contracted by 5.1 per cent from Rs. 700538 crore to Rs. 664792 crore at the end of 2011-12. The Indian asset management industry has shown relatively slow growth *(KPMG & ICC, 2014, p. 4)*. There were 1638 schemes which are managed by asset management industry and total asset under management stood Rs. 905120 crore at the end of 2013-14.

Graph - 4.4 Trends of AUM in Forth Phase



Source: AMFI Reports.

4.8 CURRENT SCENARIO OF ASSET MANAGEMENT COMPANIES

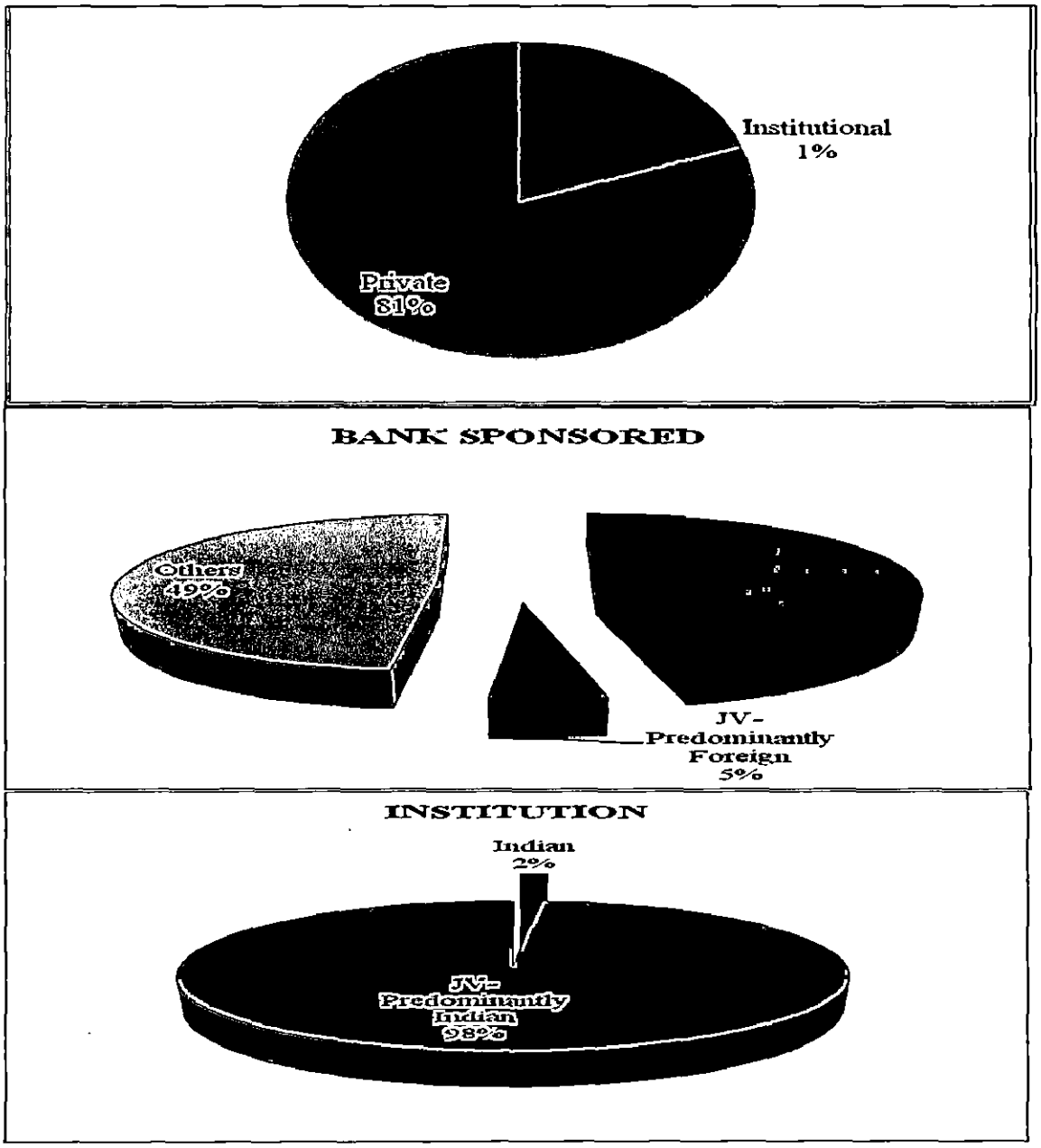
The Asset Management Industry in India consists of a vibrant and rapidly growing mutual funds sector. The industry consists of 46 active companies and managing more than Rs. 9 lakh crore of funds reflecting the change in the world of asset management in India. The big driver of revenue of AMC's in India is portfolio management services (PMS) which contribute more than 20 per cent of the total revenue *(India Financial Institute Practice. n.d., p.4)*.

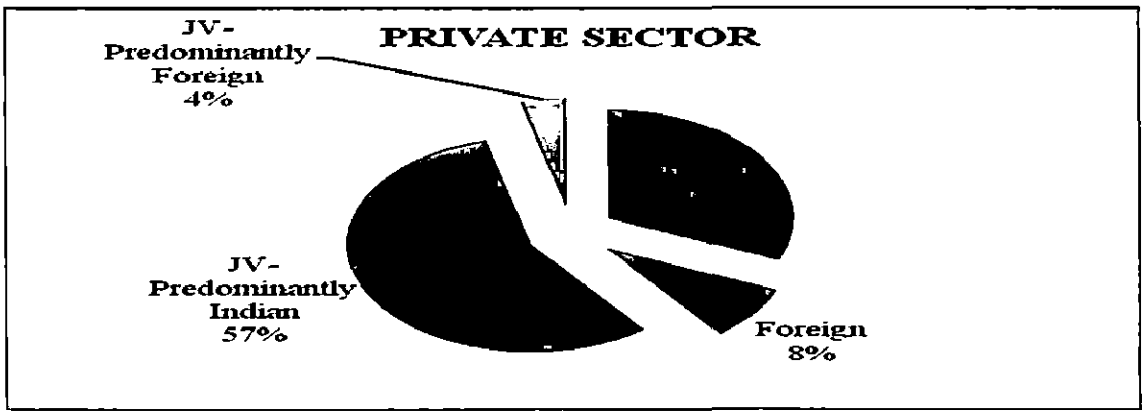
The industry in India is highly dynamic and it is rapidly growing. The rate of growth is much faster than those of developed economies such as US and UK and emerging markets such as Brazil *(India Financial Institute Practice. n.d., p.3)*. The current scenario of the industry is discussed below-

Industry- wise

The asset under management through the route of mutual fund is done broadly by three categories, namely, banks, private sector and institutions. The structure of the institution wise asset under management is depicted in Graph 4.5 which gives the details of the asset under management. The private sector asset management companies accounted for 81 per cent of the asset under management of the industry in 2013-14. This private sector witnessed a 10.75 per cent increase in AUM in 2013-14 as compared to previous year. In 2013-14, Bank sponsored asset management companies' consist of 18 per cent of total AUM and Institutions asset management companies accounted for 1 per cent of total AUM.

Graph – 4.5 Assets under Management (Industry Specific)





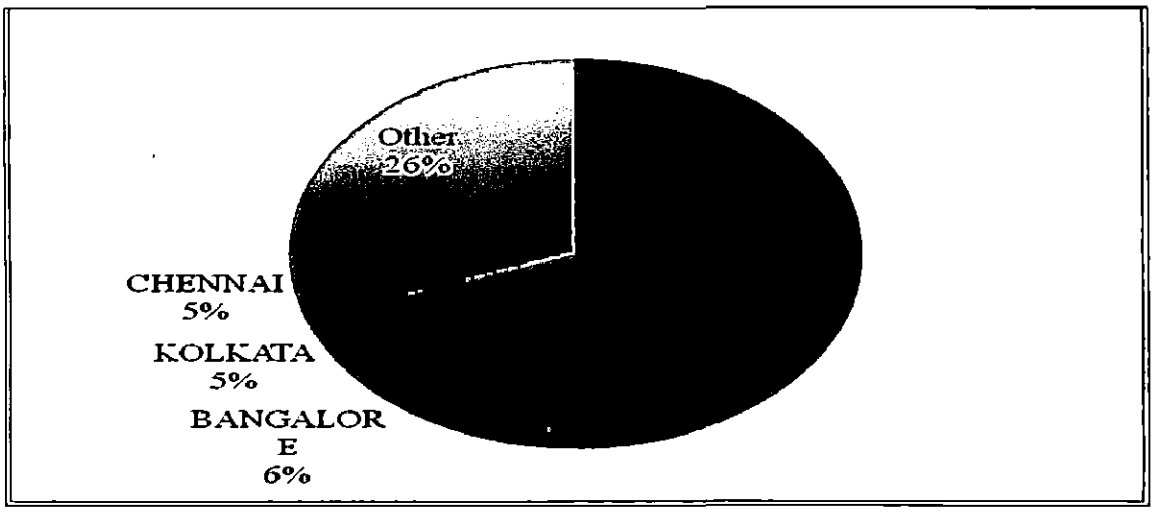
Source: AMFI Reports.

In the sub classification of the asset management industry as depicted in the graph, other segment of bank sponsored companies consists of 49 per cent share. Joint venture- predominantly Indian companies are dominating in Institution and private sector with holding majority of asset under management.

Geography- wise

India's unique demographic characteristics make distribution a key focus issue for asset management companies. The industry has grown tremendously over the past few years in spite of not having much constructive regulation on the distribution sale *(Stuart S., 2009, p. 5)*. Graph 4.6 shows geographical sharing of asset under management in India. It is clear from the graph 4.6 that majority of AUM contributed from Mumbai having the share of 42 per cent followed by Delhi 16 per cent, Bangalore 6 per cent, Kolkata and Chennai 5 per cent and other cities hold 20 per cent of total asset under management at the end of 2013-14.

Graph – 4.6 Assets under Management (Geography Wise)

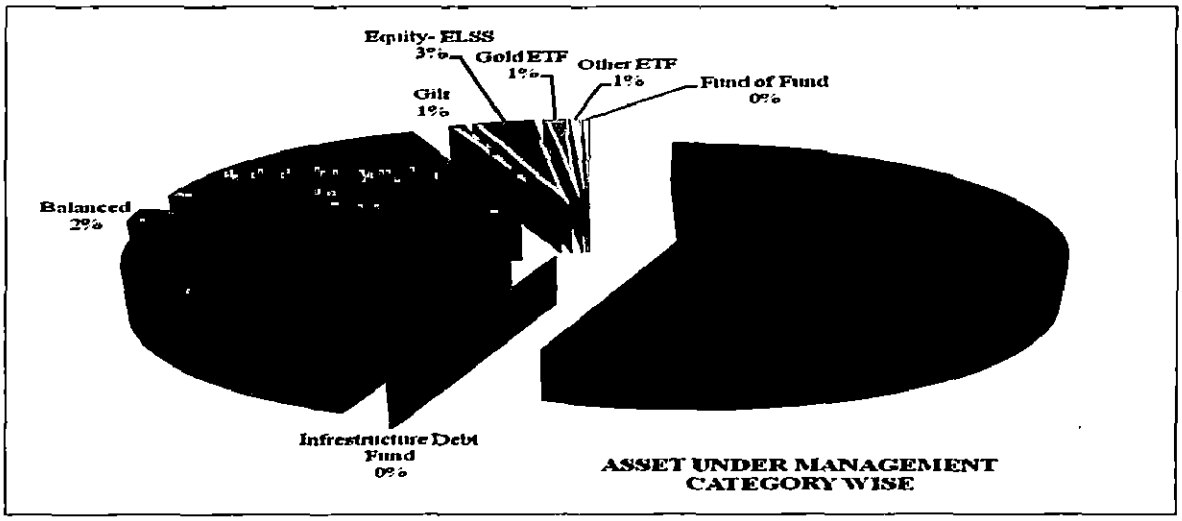


Source: AMFI Reports.

Objective- wise

The equity-debt mix is determined largely by the performance of the capital markets and interest rate cycles *(KPMG & ICC., 2014, p.5)*. The Income schemes provide regular and steady income to investors by investing in fixed income securities such as bond, corporate debenture, government securities and money market instruments are also popular among the investors. They accounted for 56 per cent of the asset under management in the year 2013-14. The Liquid/Money market schemes have become very popular among investors due to the attractive returns delivered by them. They accounted for 16 per cent of the asset under management. The share of equity schemes were 20 per cent and remaining share was contributed by balanced schemes, GILT, Equity ELSS, Gold- ETF, Other- ETF and funds of fund scheme.

Graph – 4.7 Assets under Management (Objective Wise)

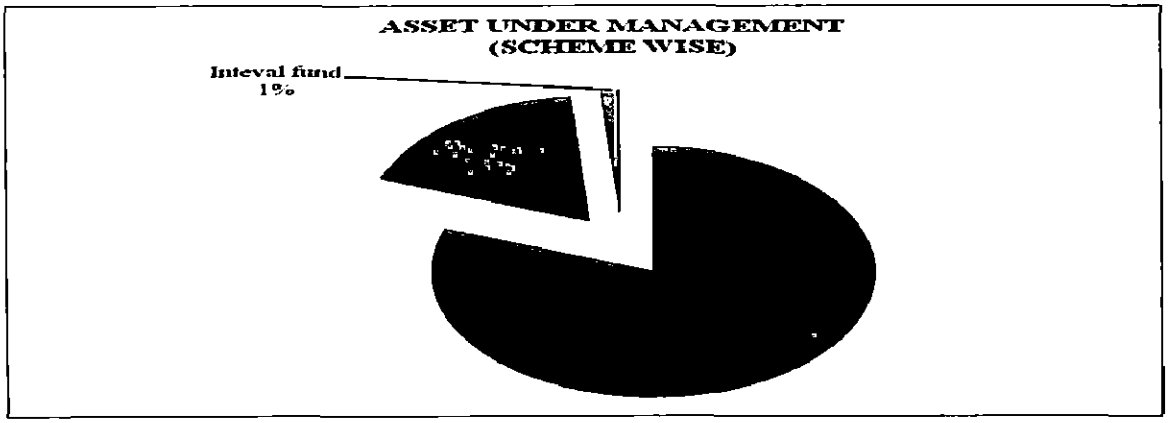


Source: AMFI Reports.

Scheme- wise

The new realities in financial markets and the asset management industry are also opening up opportunities for innovative products, services and business models *(Ernst & Young, 2012, p.2)*. The share of open- ended schemes in the total asset under management in 2013-14 continued to dominate over the other schemes (such as close-ended and interval funds). The share of open-ended schemes in the total AUM was 81 per cent. The Close-ended schemes registered 18 per cent and interval schemes hold remaining 2 per cent of the total AUM.

Graph – 4.8 Assets under Management (Scheme Wise)



Source: AMFI Reports.

Investors wise

The investor wise asset under management pattern depicted in Table- 4.6 shows that the individual investors accounted for 96.95 per cent (62.59 in private sector and 34.36 per cent in public sector) of the total number of investor accounts at the end of 2013-14. They were followed by Non resident Indians and Corporate/ institutions having a share of 1.8 and 1.2 per cent of the total number of accounts respectively. The corporate/institutions accounted for 48.61 per cent of the net assets of the industry in 2013-14, followed by individuals, who accounted for 45.73 per cent.

Table- 4.6 Asset under Management- Investors wise

Category	Per cent to Total AUM	Per cent to total Net assets
Individual	96.95	45.73
NRI/OCB's	1.83	4.69
FII	0	0.96
Corporates/Institutions/others	1.22	48.61
Total	**100**	**100**

Source: SEBI Reports.

4.9 DEVELOPMENT OF ASSET MANAGEMENT COMPANIES IN INDIA

Asset Management Companies in India witnessed several developments since the SEBI (Mutual Funds) Act 1996 came into existence. Various developments in the asset management industry can be defined as:

Technological Development

Asset Management Companies have introduced technological innovations such as transacting through the internet, net asset value updates on mobile phones, unit balance alerts via SMS messages, transacting through ATM cards etc. However, these innovations currently cater to the already pampered urban class of investors.

Innovative Distribution Model

Some of the Asset Management Companies are known globally for their specialization in structured products and offering a collection of different choices to the investors. With competition going up in India and most of the companies offering the same bunch of products to the investors, product differentiation could take centre stage going forward. Innovative distribution models and service standards would also be a key distinguishing factor among the Asset Management Companies.

Investor Education

One of the biggest drivers for growth in the asset management industry will be the consistent rate of return from the usual investment products. Investor always prefer the safety of capital, they immediately turn to bank deposits and insurance products. Capital markets are usually looked upon as avenues for high-yields and are therefore considered high-risk. This traditional pattern of investment transform by the investor education. It shifts the small investment of the investors in the mutual fund schemes which provides regular return at low risk. The efforts taken by the industry and AMFI towards investor education are showing remarkable results. The media is also making a fair share of its contribution. Some of the news channels dedicated to show the daily performance of mutual funds managed by Asset Management Companies, wherein fundamentals of investing in mutual funds are explained and queries of investors are answered by experts. However, the fact remains that in our country mutual funds are sold rather than bought and this trend has been observed uniformly across all classes of investors and for all kinds of products.

Investment in Foreign Debt

SEBI has permitted the Indian Asset Management Companies to make investments in foreign debt securities. As per the circular issued by SEBI, Asset Management Companies have been allowed to invest in foreign debt securities with highest credit rating in the countries with fully convertible currencies provided the guidelines laid down in the Circular are complied with. Similarly, the Indian Asset Management Companies have also been permitted to make investments in non-Indian government

securities where the countries are AAA rated. However, such investment is permitted subject to an overall cap of 10 per cent of the net assets of a Mutual Fund, subject to the maximum of USD 50 million, per Mutual Fund for making investments in the Foreign Debt Securities and American Depository Receipts and Global Depository Receipts issued by Indian companies. This has opened up newer opportunities for domestic Asset Management Companies for investing in foreign securities. This also enables Asset Management Companies to hedge their country risk by spreading their investments amongst different countries. Several funds have announced schemes for such overseas investments.

Investment by Resident in Foreign Securities

The Reserve Bank of India, as a part of its ongoing liberalization and with a view to usher in full convertibility of Rupee, has recently permitted Indian residents, including Asset Management Companies to invest in foreign securities, subject to an overall cap of USD 1 billion. Such investment will have to be made in foreign companies whose shares are listed on an overseas exchange and which has at least 10 per cent holding in an Indian company which is also listed on the Indian stock exchange. While these conditions may sound restrictive, it is only a matter of time when the RBI will look at further relaxations. This has opened up an opportunity for Indian investors to invest in the overseas market and this also throws up an opportunity for Asset Management Companies to tap into these investments since individual investors would be more comfortable to invest through a mutual fund vis-à-vis a direct exposure to foreign securities.

Compulsory Certification of Sales/Marketing Personnel

SEBI together with the Association of Mutual Funds of India has made it mandatory for the sales and marketing personnel of Asset Management Companies to obtain a certification. This requires such personnel to appear for a test which is currently conducted by the AMFI. The move is to educate the sales personnel on the basics of investment and on the current regulations so as to ensure that no false representations are made to the investors by the sales personnel and is a move towards bringing in more accountability to the asset management company.

Investment in Real Estate Mutual Fund Schemes

AMFI has recently submitted to SEBI, draft guidelines for allowing mutual funds to invest in real estate. The move is in response to a growing need of the real estate sector and also the fact that this sector has provided to be an attractive investment

opportunity for investors. Real Estate Investment Trusts (REITS) are popular investment vehicles, contributed significantly to the development of economies like U.S. and U.K. A need was felt for implement such REITs structure in India and in response to that SEBI constituted a committee to examine the current regulations governing mutual funds and to recommend a set of guidelines for setting up schemes under the current framework for investing in real estate. The report has been submitted by the committee to the SEBI which has been put-up for public comments. It is expected that shortly, the SEBI would notify these new set of regulations.

Splitting up of UTI

The Unit Trust of India (Transfer of Undertaking and Repeal) Act 2002, enacted in December 2002, provides bifurcation of UTI in UTI-I and UTI-II which comprising US-64, assured return schemes and development of reserve fund (appearing in the schedule-I of the act) will be transfer in government undertaking. UTI-II comprising NAV based schemes (appearing in schedule-II) will invest in specified company from an appointment day which id February 1, 2003. UTI-I has been named as 'Administration of the specified undertaking of the UTI' and UTI-II have set up a mutual fund named as UTI mutual fund. On March 1, 2003, US-64 has came to an end as investors of US-64 were given option of 6.75 per cent tax free interest payable half yearly government guaranteed tradable bonds in lieu of cash payment as on May 31, 2003.

An ordinance was passed by the President of India which repealed the Unit Trust of India Act, 1963 thereby splitting UTI into two funds viz. UTI-I and UTI-II. The ordinance was issued in wake of the severe payment crisis that UTI had faced on account of its assured return schemes which resulted in an adverse impact to the Indian capital markets. UTI being the first mutual fund set-up in India had always been a symbol of trust and at the time of bifurcation was the largest mutual fund in India. Also, since it was constituted under a special enactment, it was not strictly governed by the SEBI regulations. A need was felt to bring UTI within the SEBI purview and also to ensure that the units are made NAV linked. UTI-I now consists of all assured return scheme (including US 64) whereas UTI-II now consists of all other schemes which are NAV linked. UTI-I has a government guarantee and will be managed by an AMC formed by The Life Insurance Corporation of India, the Bank of Baroda and The Punjab National Bank. Over a period of time, the asset management function of UTI-II will be privatized.

4.10 CONCLUSION

The outlook of the asset management industry is governed to a great extent by the economic condition in the country. To capitalize the growth opportunity, AMCs are increasingly offering a variety of product innovations and the number and size of asset management joint ventures between foreign and local players are growing *(Global Investor, 2008, p.2)*. Although market is relatively nascent in terms of its product offerings relative to developed markets, several new product launches have been made in recent years. For example, exchange traded funds, capital protection funds and overseas funds have gained popularity and help the Companies in offering more comprehensive life cycle financial planning. Over time, additional product offering may potentially grow in India, such as alternative assets, emerging market funds and commodity funds. As per the forecast by Boston Consulting Group, assets under management could grow to $520 billion by 2015. More than 20 foreign companies are considering entering the Indian fund market *(U.S. Commercial Service India., n.d., p.1)*. Because of barriers to new product introduction are fairly low (after SEBI has approved a product), the sustainability of this competitive advantage is under constant threat for those firms that do not effectively differentiate innovations. Moreover, distribution remains a key challenge, because of low distributor incentives offered by AMCs. Despite the significant growth opportunity available in the Indian asset management industry, profitability remains low and under continued pressure across the industry due to high distribution costs, marketing expenditures, and the cost of investment talent. Indeed, several foreign companies have exited from the market after struggling to achieve profitability while adapting to recent regulatory changes. Looking forward, foreign companies believe that although the growth trajectory may be bumpy and challenging at times, the long-term opportunity for operating in India may hold potential.

REFERENCES

Association of Mutual Funds in India. (2014)[1]. Statement of Additional Information (SAI), IL&FS Infra Asset Management Limited, 3-35, retrieved from http://portal.amfiindia.com/spages/sai65.pdf

Association of Mutual Funds in India. (2014)[2]. AMFI monthly report March 2014, retrieved from http://portal.amfiindia.com/spages/ammar2014repo.pdf

Association of Mutual Funds in India. (n.d.). Mutual Fund history, retrieved from http://www.amfiindia.com/research-information/mf-history

Bose S. (2012). Some aspects of Indian Mutual Funds' performance during the Recent Financial Crisis. Money & Finance, ICRA Bulletin, 75-112, retrieved from http://www.icra.in/Files/MoneyFinance/3.%20Suchismita%20 Bose.pdf.

Chakrabarti R. (n.d.). The Asset Management Industry in India. 1-47, retrieved from http://ssrn.com/author=256160

COB Asset Management division.(2001). Asset management in France. 1-5 Retrieved from http://www.amf-france.org/technique/multimedia?docId=workspace://SpacesStore/be831da0-9567-4acc-b109-5a34c65ac8a7_en_1.0_rendition.

Confederation of Indian Industry. (2010). Indian Mutual Fund Industry- Towards 2015. CII 6th Mutual Fund Summit 2010, 1-26. Retrieved from https://www.pwc.in/assets/pdfs/financial-service/Towards_2015.pdf

Debasish S.S. (2009). Investigating performance of Equity- based Mutual Fund Schemes in Indian Scenario. *KCA Journal of Business Management, 2*(2). 1-15

Deloitte Center for Financial Services. (2012). Growth opportunities for financial Services in India: Investing for the long term in the world's largest democracy, 1-16, retrieved from https://www.deloitte.com/assets/DcomUnitedStates/Local%20Assets/Documents/FSI/US_FSI_GrowthOpportunutiesforFinancialServicesIndia_100412.pdf

Ernst & Young. (2012). Asset management opportunities in new realities. 1-16, retrieved from http://www.rolandberger.com/media/publications/2012-09-11-rbsc-pub-Asset_management_opportunities.html

Finance Maps of World. (n.d.). Asset Management, retrieved from rhttp://finance.mapsofworld.com/asset-management/

Global Investor. (2008). Positioning in India's asset management industry, retrieved from http://www.globalinvestormagazine.com/Article/2227078/Positioning-in-Indias-asset-management-industry.html.

India Financial Institute Practice. (n.d.). Indian Asset Management: Achieving broad-based Growth. 1-6.

Investment Company Institute. (2013). Investment Company Fact Book: A Review of Trends in the U.S. Investment Company Industry, 1-252, retrieved from http://www.icifactbook.org/pdf/2013_factbook.pdf

Kale R. J. & Panchapagesan V. (2012). Indian mutual fund industry: Opportunities and challenges. *IIMB Management Review, 24*, 245-258.

Kamble R. M. (2013). Mutual funds and SEBI regulations. *International Journal of Computational Engineering Research, 3*(5), 23-27, retrieved from http://www.ijceronline.com/papers/Vol3_issue5/Part.1/E0351023027.pdf

KPMG & ICC. (2014). Indian Mutual fund industry- Distribution continuum: Key to success, 1-18, retrieved from https://www.kpmg.com/IN/en/IssuesAndInsights/ArticlesPublications/Documents/Indian-Mutual-Fund-Industry.pdf

Lakhmi N. (2012). Performance of the Indian mutual fund industry: A study with special reference to growth schemes. (Unpublished Doctoral Thesis). *Pondicherry University.* India.

Nomura Research Institute Ltd. (2010). Growth of the asset management business in Asia. *Lakyara, Special Ed., 85,* 1-12, retrieved from http://www.nri.com/global/opinion/lakyara/2010/pdf/lkr201085.pdf

Sridhar D. & Chadrashekhara G. (2010). Indian asset management Industry. On Quest, Consultancy Club of IIM Shillong, 2-23, retrieved from http://www.iimsconquest.in/oldwebsite/shownews.php?subaction=showcomments&id=1283167860&archive=&start_from=&ucat=2,3&month=2&year=2015

Stuart S. (2009). Asset management in India: A round table discussion, 1-20, retrieved from https://www.spencerstuart.com/~/media/PDF%20Files/Research%20and%20Insight%20PDFs/Asset-Management-in-India_28May2009.pdf

Tripathi N. P. (2007). Mutual Funds in India: Emerging Issues. *Excel Books.* New Delhi, India, 1-269, ISBN: 81-7446-535-9

U.S. Commercial Service India. (n.d.). Pension and Asset Management in India. Banking, Finance and Insurance in India.

Walter I. (1998). The Global Asset Management Industry: Competitive Structure, Conduct and Performance. *NYU Working Paper No. FIN-98-072*, 2-110 retrieved from http://ssrn.com/abstract=1298274

Walter I. & Sisli E. (2006). The Asset Management Industry in Asia: Dynamics of Growth, Structure and Performance. 4-85, retrieved from http://ssrn.com/abstract=929162.

Wikipedia. (n.d.). Securities and Exchange Board of India, retrieved from http://en.wikipedia.org/wiki/Securities_and_Exchange_Board_of_India

Chapter-5

ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

This chapter discusses the empirical results regarding the overall performance of Indian asset management companies during the period of April 2000 to March 2014. The empirical results relating to the investment performance and market timing abilities of Indian asset management companies and some industry specific analysis are presented in this chapter. It is worthwhile to mention here that the study utilized a sample of 62 schemes selected from bank sponsored, institution and private asset management companies for the purpose of evaluation. In terms of sponsoring institution, 7 schemes are taken from 3 Bank sponsored companies, 4 schemes from 1 Institution asset management companies and 51 from 15 private asset management companies. In terms of investment objective, 36 schemes are the growth schemes, 14 schemes are the hybrid schemes and 12 are the income schemes. The data employed in the study consist of daily NAV (Net Asset value) for all the schemes for the period of 1st April, 2000 to 31st March, 2014. The study utilizes the different benchmark index as applicable for the schemes. Some benchmark index are not in existence at the starting point of study period, for such mutual fund schemes S&P BSE Sensex is used as a proxy of benchmark index. Thus nine benchmark index used for measuring the performance of 62 sample mutual fund schemes. The daily US Treasury bills (T-Bills) 91-days are taken as a proxy for risk free return for the study period.

5.2 INVESTMENT PERFORMANCE OF SAMPLE FUND SCHEMES MANAGED BY ASSET MANAGEMENT COMPANIES

Performance evaluation is the important part of the process of the asset management. The investment performance of the fund has to be measured in relation to the broad investment objective of the fund and its anticipated risk-return relationship. Performance measurement includes the future liabilities related to the assets in the portfolio and liquidity management *(Sadhak H. 2009, p. 322)*. The performance evaluation of the sample mutual fund schemes has been carried out with the help of Risk and Return Analysis, Treynor Measure, Sharpe Measure, Jensen Measure, Fama Measure.

Risk and Return Analysis

Risk and return have been the most frequently relied measure of performance of managed mutual fund schemes. The performance of mutual funds is commonly

expressed in terms of these measures. These measures help in developing different performance evaluation models.

Return

The return of the each sample mutual fund schemes have been computed from the following equation:

$$Return = (NAV_t - NAV_{t-1}) / NAV_{t-1}$$

where, NAV_t is Net Asset Value of a mutual fund scheme for a day t, NAV_{t-1} is the Net Asset Value for day (t-1). For the benchmark index, the return is calculated as:

$$Return = (Index_t - Index_{t-1}) / Index_{t-1})$$

Average rate of return is obtained by taking the mean of daily return divided with number of observations in the study period

$$Average\ Return = (R_1 + R_2 + R_3 \ldots\ldots\ldots\ldots R_n) / N$$

Risk

The risk is calculated on the basis of daily-end NAV. The following measures of risks associated with mutual funds have been for the study:

Standard Deviation- The total risk is measured by the standard deviation of the daily returns which was calculated using the following formula:

$$\sigma = \sqrt{\frac{1}{n-1} \sum_{t=1}^{n} (R_t - \overline{R})^2}$$

where,

σ = *Standard Deviation,* n= *number of days*

R_t = *daily returns of the mutual fund* $\overline{R}$ = *mean return of the mutual fund*

The square of the standard deviation is called the variance. $Variance = (\sigma)^2$

Coefficient of Variation- Expresses the total risk undertaken by the mutual funds under consideration per unit of returned achieved. More specifically, the coefficient of variation was given by:

$$Coefficient\ of\ Variation = \frac{\sigma}{\overline{R}}$$

Beta(β)- Beta estimate the systematic risk, is the fund's volatility as regard market index measuring the extent of co movement of fund with that of the benchmark index.

$$\beta = \frac{Covariance\ between\ fund\ return\ and\ market\ return}{Varianceofmarketreturn}$$

Higher the values of beta indicate a high sensitivity of fund returns against market return and the lower the value indicates lower sensitivity.

Table - 5.1 Descriptive Statistics of Sample Mutual Fund Schemes

Mutual Fund Schemes	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis	COV
1	3369	-.3412	.1682	.000240	.0173595	.000	-3.094	57.991	72.3313
2	3449	-.0690	.1157	.000567	.0113040	.000	-0.161	6.407	19.9365
3	3464	-.1185	.1835	.000475	.0159605	.000	-0.077	9.186	33.6011
4	3449	-.0977	.1489	.000631	.0129227	.000	-0.137	9.038	20.4797
5	3415	-.0116	.0165	.000287	.0008280	.000	2.179	111.591	2.8850
6	3408	-.0636	.0444	.000328	.0035282	.000	-0.713	51.119	10.7567
7	3402	-.0467	.0409	.000334	.0025370	.000	-0.377	71.32	7.5958
8	3463	-.1041	.1238	.000394	.0168252	.000	-0.176	5.794	42.7036
9	3465	-.0755	.0846	.000683	.0108117	.000	-0.545	6.203	15.8297
0	3398	-.0309	.0206	.000374	.0025862	.000	-0.794	14.711	6.9150
11	3451	-.4355	.7296	.000483	.0242665	.001	6.031	267.007	50.2412
12	3497	-.0548	.0583	.000331	.0032229	.000	0.769	88.424	9.7369
13	3497	-.0548	.0583	.000331	.0032208	.000	1.244	82.668	9.7305
14	3454	-.0740	.1001	.000561	.0100955	.000	-0.343	6.727	17.9955
15	3410	-.0234	.0208	.000293	.0017446	.000	-0.067	25.614	5.9543
16	3408	-.4738	.9012	.000602	.0247827	.001	24.032	1098.838	41.1673
17	3434	-.0932	.1440	.000764	.0146993	.000	-0.072	5.279	19.2399
18	3435	-.1067	.1667	.000547	.0172404	.000	-0.182	5.984	31.5181
19	3430	-.0851	.1494	.000756	.0140086	.000	-0.104	6.878	18.5299
20	3433	-.1622	.1138	.000424	.0201814	.000	-0.123	4.896	47.5976
21	3411	-.0567	.1195	.000571	.0103416	.000	0.083	7.572	18.1114
22	3407	-.0959	.1120	.000478	.0061370	.000	0.639	54.743	12.8389
23	3447	-.0992	.1386	.000861	.0147898	.000	-0.168	5.035	17.1775
24	3456	-.0420	.0343	.000309	.0022577	.000	-0.49	69.026	7.3065
25	3450	-.0716	.0956	.000794	.0101893	.000	-0.281	5.348	12.8329
26	3449	-.5262	.1277	.000709	.0163978	.000	-9.68	311.069	23.1281
27	3446	-.1161	.1541	.000827	.0148615	.000	-0.206	7.19	17.9704
28	3440	-.1919	.2336	.000536	.0121611	.000	0.53	60.548	22.6886
29	3434	-.0885	.0619	.000764	.0115415	.000	-0.611	5.246	15.1067
30	3435	-.1214	.0867	.000504	.0178008	.000	-0.325	3.568	35.3190
31	3442	-.9875	74.4057	.021969	1.2684402	1.609	58.64	3439.739	57.7377
32	3432	-.1641	.1998	.000673	.0161084	.000	0.039	13.786	23.9352

33	3434	-.1417	.1421	.000325	.0199048	.000	-0.339	7.357	61.2455
34	3400	-.0492	.0312	.000308	.0022828	.000	-2.04	92.812	7.4117
35	3457	-.3537	.1481	.000236	.0149268	.000	-7.625	167.014	63.2492
36	3450	-.1053	.2077	.000402	.0167571	.000	0.032	10.358	41.6843
37	3448	-.1147	.1442	.000569	.0149490	.000	-0.341	7.149	26.2724
38	3442	-.2460	.1028	.000158	.0128292	.000	-5.033	78.174	81.1975
39	3497	-.0323	.0412	.000320	.0022464	.000	0.439	66.821	7.0200
40	3409	-.0212	.0269	.000235	.0022415	.000	0.554	32.381	9.5383
41	3494	-.4444	.0228	.000169	.0075656	.000	-58.124	3416.211	44.7669
42	3401	-.0863	.0958	.000333	.0048311	.000	2.151	289.951	14.5078
43	3396	-.1308	.1800	.000461	.0164468	.000	-0.09	9.219	35.6764
44	3389	-.1080	.2021	.000460	.0163806	.000	0.052	10.626	35.6100
45	3390	-.1567	.1860	.000334	.0157955	.000	-0.301	12.429	47.2919
46	3415	-.0724	.0978	.000439	.0112528	.000	-0.407	5.106	25.6328
47	3430	-.1214	.1746	.000528	.0158382	.000	-0.068	8.458	29.9966
48	3497	-.9868	75.4083	.022109	1.2753565	1.627	59.109	3494.956	57.6849
49	3497	-.1079	.1462	.000823	.0145492	.000	-0.045	7.308	17.6783
50	3402	-.1514	.1091	.000364	.0127624	.000	-1.053	13.269	35.0615
51	3391	-.1775	.1511	.000340	.0172036	.000	-0.753	10.1	50.5988
52	3383	-.2288	.1086	.000458	.0168879	.000	-1.287	14.496	36.8731
53	3402	-.2519	.1366	.000303	.0191945	.000	-2.068	23.055	63.3482
54	3433	-.1823	.1683	.000575	.0157039	.000	-0.653	12.737	27.3111
55	3428	-.1689	.1219	.000563	.0118369	.000	-1.058	18.616	21.0247
56	3422	-.4262	.1089	.000484	.0173429	.000	-4.617	110.285	35.8324
57	3419	-.1464	.1571	.000700	.0155377	.000	-0.263	8.697	22.1967
58	3426	-.5318	.1480	.000243	.0188574	.000	-7.388	196.028	77.6025
59	3429	-.3511	.0604	.000044	.0123267	.000	-14.898	372.228	280.1523
60	3369	-.2301	.1879	.000623	.0169377	.000	-0.902	19.005	27.1873
61	3438	-.9879	81.0278	.023663	1.3821285	1.910	58.607	3435.851	58.4088
62	3441	-.1195	.1943	.000647	.0174848	.000	-0.006	7.716	27.0244

Source: Researcher Compilation

(Note- The serial Number represents the name of the sample mutual fund schemes as given in Table 1.4).

Table 5.1 shows the descriptive statistics of various sample mutual fund schemes for the study period April 2000 to March-2014. It consists of daily number of observation, minimum, maximum, mean, standard deviation, variance of return, skewness kurtosis and

coefficient of variation of the sample mutual fund schemes. There are 62 sample mutual fund schemes in the sample where number of observations range between 3369 to 3497 depending upon the working days exist is particular mutual fund scheme within the sample period. The minimum daily return of all the sample schemes are found to be negative where maximum return of all the sample mutual fund schemes found to be positive with highest in the case of Taurus Discovery Fund – Growth (81.0279). Standard Deviation, variance and COV are the method of dispersion which shows the variability of sample mutual fund schemes. The square of standard deviation gives the value of variance and Coefficient of Variation (COV) is found by dividing standard deviation by mean returns. It can be observed from the table that Taurus Discovery Fund – Growth has the highest value in terms of standard deviation and variance and at the same time it has provide highest average return among all the sample mutual fund schemes. In terms of Coefficient of variation Tata Young Citizens Fund scheme shows more variability in comparison with other sample mutual fund schemes. In order to take further analysis, sample mutual fund schemes have been classified into the following four categories on the basis of their return and risk characteristics.

Table - 5.2 Risk-Return Matrix of the Sample Mutual Fund Schemes

Quadrants- I, $R_p > R_m$, $\sigma_p < \sigma_m$	Quadrants- II, $R_p > R_m$, $\sigma_p > \sigma_m$
Birla Sun Life 95 – Growth	Birla Sun Life New Millennium – Growth
Birla Sun Life Buy India Fund – Growth	Escorts Income Plan – Growth
Birla Sun Life MNC Fund – Growth	HDFC Taxsaver – Growth
DSP BlackRock Balanced Fund – Growth	ICICI Prudential Top 100 Fund – Cumulative
Franklin India Bluechip– Growth	Reliance Growth – Growth
Franklin India Prima Plus – Growth	Taurus Bonanza Exclusive Growth Scheme 95
Franklin Infotech Fund – Growth	Taurus Discovery Fund – Growth
Franklin Templeton India Balanced Fund – Growth	Taurus Starshare Fund – Growth
HDFC Equity Fund – Growth	
HDFC Prudence Fund – Growth	
HDFC Top 200 – Growth	
ICICI Prudential FMCG – Growth	
ICICI Prudential Technology Fund – Growth	

ICICI Prudential Top 200 Fund – Growth	
Kotak 50 – Growth	
Reliance Vision – Growth	
Sundaram Growth Fund – Growth	
Tata Balanced Fund – Growth	
Tata Pure Equity Fund – Growth	
Quadrants- III, $R_p<R_m$, $\sigma_p<\sigma_m$	**Quadrants- IV, $R_p<R_m$, $\sigma_p>\sigma_m$**
Birla Sun Life Advantage Fund – Growth	Baroda Pioneer Equity Linked Saving Scheme 96
Birla Sun Life Gilt Plus Liquid Plan – Growth	Birla Sun Life India Opportunities Fund – Growth
Birla Sun Life Gilt Plus P F Plan – Growth	Franklin India Opportunity Fund – Growth
Birla Sun Life Income Plus – Growth	ICICI Prudential Balanced – Growth
Birla Sun Life Monthly Income Plan – Growth	ING Core Equity Fund – Growth
CanaraRobeco Gilt PGS- Growth	JM Equity – Growth
CanaraRobeco Monthly Income Plan – Growth	LIC Nomura Equity Fund
DSP BlackRock Bond Fund - Retail Plan – Growth	LIC Nomura MF Growth Fund – Growth
Templeton India Pension Plan – Growth	SBI Magnum Equity Fund – Growth
HDFC High Interest Fund- Dynamic Plan – Growth	SBI Magnum Multiplier Plus 93 – Growth
ING Income Fund - Regular Plan – Growth	SBI Magnum Tax Gain Scheme 93 – Growth
JM Balanced – Growth	Tata Ethical Fund - Appreciation (Formerly Select Equity Fund)
Kotak Balance – Growth	Tata Tax Saving Fund
Kotak Bond Deposit – Growth	
L & T Triple Ace - Regular – Growth	
L & T Ultra Short Term Fund - Regular – Growth	
LIC Nomura Bond Fund – Growth	
LIC Nomura Tax Plan	
PRINCIPAL Balanced Fund – Growth	
PRINCIPAL Index Fund – Growth	
SBI Magnum Balanced Fund – Growth	
Tata Young Citizens Fund	

Source: Researcher Compilation

This matrix is given in above Table 5.2 gives a clear idea of risk-return relationship of all the samples in relation to the benchmark portfolio. The investor can link his investment to the quadrants on the lines of matrix. First quadrants represents those high return low risk funds which return is greater than benchmark index and funds risk is less than market risk. Second quadrants consists those high return and high risk funds where return of funds is greater than market and fund risk is also greater than market risk. Quadrant third shows low return and low risk funds where fund return and fund risk is less than market return and market risk. Last quadrant shows low return and high risk funds where fund return is less then market return but fund risk is greater than market risk. The significance of the grid is that it provides comparison of mutual funds performance vis a vis market portfolio in terms of risk return characteristics. Out of 62 sample mutual fund schemes, there are 19 mutual fund schemes in Quadrant-I and 8 schemes in Quadrant-II, in which all the schemes are related to private sponsored asset management companies in first and second quadrant. The Quadrant-III consists of 22 mutual fund schemes in which 3 Bank sponsored 2 Institution and 17 Private sponsored mutual fund schemes. Rest of the 13 mutual fund schemes belongs to Quadrant-IV in which 4 are Bank Sponsored, 2 are Institution and 7 are the Private Sponsored Asset Management Companies. So it can be found from the risk-return matrix that 27 schemes out of 62 shows higher return as compared to market return and remaining 35 schemes have lower average return than market.

Table - 5.3 Risk and Return Analysis (Funds vs. Benchmark Index)

Scheme Name	Return of Scheme	Risk of Scheme	Return of Market	Risk of Market	Risk free Rate	Beta(β)	Benchmark Index
1	0.00024	0.01736	0.00058	0.01616	0.00016	-0.04441	R
2	0.00057	0.01130	0.00056	0.01609	0.00016	0.07443	R
3	0.00047	0.01596	0.00055	0.01610	0.00016	0.02182	O
4	0.00063	0.01292	0.00056	0.01623	0.00016	0.06863	O
5	0.00029	0.00083	0.00057	0.01592	0.00016	-0.00008	R
6	0.00033	0.00353	0.00057	0.01594	0.00016	-0.00459	R
7	0.00033	0.00254	0.00057	0.01598	0.00016	-0.00009	R
8	0.00039	0.01682	0.00053	0.01599	0.00016	0.03434	A
9	0.00068	0.01081	0.00050	0.01380	0.00016	0.01699	E
10	0.00037	0.00259	0.00057	0.01600	0.00016	0.01092	R

11	0.00048	0.02427	0.00033	0.02132	0.00016	0.19234	S
12	0.00033	0.00322	0.00056	0.01597	0.00016	-0.00094	R
13	0.00033	0.00322	0.00056	0.01597	0.00016	-0.00051	R
14	0.00056	0.01010	0.00056	0.01599	0.00016	0.01408	R
15	0.00029	0.00175	0.00057	0.01597	0.00016	0.00009	R
16	0.00060	0.02478	0.00057	0.01588	0.00016	-0.00575	R
17	0.00076	0.01470	0.00056	0.01591	0.00016	0.08293	R
18	0.00055	0.01724	0.00056	0.01620	0.00016	0.09054	O
19	0.00075	0.01401	0.00053	0.01602	0.00016	0.08038	A
20	0.00042	0.02018	0.00042	0.02413	0.00016	0.12730	P
21	0.00057	0.01034	0.00057	0.01592	0.00016	0.07881	R
22	0.00048	0.00614	0.00057	0.01589	0.00016	0.02017	R
23	0.00086	0.01479	0.00053	0.01591	0.00016	0.04373	A
24	0.00031	0.00226	0.00056	0.01610	0.00016	0.00127	R
25	0.00079	0.01019	0.00056	0.01611	0.00016	0.01363	R
26	0.00071	0.01640	0.00053	0.01590	0.00016	0.04575	A
27	0.00083	0.01486	0.00056	0.01623	0.00016	0.09069	O
28	0.00054	0.01216	0.00057	0.01613	0.00016	0.01536	R
29	0.00076	0.01154	0.00063	0.01428	0.00016	0.00434	C
30	0.00050	0.01780	0.00042	0.02413	0.00016	0.03396	P
31	0.02197	1.26844	0.00056	0.01602	0.00016	-0.90956	F
32	0.00067	0.01611	0.00056	0.01617	0.00016	0.03429	O
33	0.00033	0.01991	0.00056	0.01620	0.00016	0.04614	O
34	0.00031	0.00228	0.00057	0.01590	0.00016	0.00383	R
35	0.00024	0.01493	0.00056	0.01608	0.00016	-0.00924	R
36	0.00040	0.01676	0.00056	0.01608	0.00016	0.02429	R
37	0.00057	0.01495	0.00056	0.01602	0.00016	0.06151	F
38	0.00016	0.01283	0.00057	0.01614	0.00016	0.00178	R
39	0.00032	0.00225	0.00056	0.01597	0.00016	0.00039	R
40	0.00023	0.00224	0.00057	0.01597	0.00016	0.00333	R
41	0.00017	0.00757	0.00056	0.01598	0.00016	0.01161	R
42	0.00033	0.00483	0.00057	0.01599	0.00016	-0.00179	R
43	0.00046	0.01645	0.00057	0.01597	0.00016	-0.00662	R
44	0.00046	0.01638	0.00057	0.01598	0.00016	0.04976	R
45	0.00033	0.01580	0.00057	0.01596	0.00016	0.01851	R
46	0.00044	0.01125	0.00057	0.01592	0.00016	0.02082	R
47	0.00053	0.01584	0.00056	0.01606	0.00016	-0.00475	F
48	0.02211	1.27536	0.00053	0.01630	0.00016	-0.82431	N
49	0.00082	0.01455	0.00053	0.01630	0.00016	-0.00293	N
50	0.00037	0.01276	0.00057	0.01598	0.00016	0.00339	R
51	0.00034	0.01720	0.00057	0.01610	0.00016	0.01425	F

52	0.00046	0.01689	0.00056	0.01607	0.00016	0.04947	O
53	0.00030	0.01919	0.00054	0.01656	0.00016	0.01188	N
54	0.00058	0.01570	0.00056	0.01618	0.00016	0.07715	O
55	0.00056	0.01184	0.00056	0.01592	0.00016	0.01962	R
56	0.00048	0.01734	0.00057	0.01597	0.00016	0.01331	R
57	0.00070	0.01554	0.00057	0.01591	0.00016	0.08464	R
58	0.00024	0.01886	0.00056	0.01591	0.00016	0.03934	R
59	0.00004	0.01233	0.00056	0.01592	0.00016	0.00507	R
60	0.00062	0.01694	0.00055	0.01664	0.00016	0.02003	N
61	0.02366	1.38213	0.00057	0.01613	0.00016	3.55354	R
62	0.00065	0.01748	0.00056	0.01626	0.00016	0.04947	O
Average	0.00154	0.07528	0.00055	0.01633	0.00016	0.05749	

Source: Compile from daily return of the sample mutual fund schemes taken from SEBI and benchmark return taken from their respective website.

(Note- The serial Number represents the name of the sample mutual fund schemes and alphabets represents benchmark index as given in Table 1.4)

Table 5.3, shows the average risk and return of various sample schemes and benchmark index. In terms of average return Taurus Discovery Fund – Growth (Scheme No. 61) fund gave the highest return and the Tata Young Citizens Fund (Scheme No.59) gave the lowest return in all the samples. Taurus Discovery Fund – Growth (Scheme No. 61) is the most risky and Birla Sun Life Gilt Plus Liquid Plan – Growth (Scheme No.5) is the less risky in the entire sample. Table also shows that average return of 27 samples scheme is greater than the average of benchmark index and average risk of 20 sample schemes is greater than the average risk of benchmark index. The cross sectional average return of sample fund schemes is 0. 0.00154, more than average return of benchmark index which is 0.00055. Risk free rate is 0.00016 which is taken from average weekly yield of 91 days Treasury bills. This table also revealed that out of 62 schemes, 35 have underperform the market, 42 are found to have lower total risk than the market and all the schemes have given returns higher than risk free rates except Tata Young Citizens Fund (Scheme No. 59).

Average Return

The average returns is obtained by the mean of daily returns of the sample mutual fund schemes as wells as of benchmark index. The result of the sample mutual fund schemes on this count reported in Table 5.4.

Table - 5.4 Average Returns of Sample Mutual Fund Schemes

Average Return	No. of Schemes	(%)
< 0.0	0	0
> 0.0 < 0.00016	1	1.61
> 0.00016 < 0.00055	36	58.06
> 0.00055 < 0.00154	22	35.48
> 0.00154	3	4.84
Total	**62**	**100**

Average Return: Schemes = 0.00154, Benchmark= 0.00055, Risk Free Rate= 0.00016

Table 5.4 reveals that all the funds reported positive average annual return during the study period. Taurus Discovery Fund – Growth (0.02366) incurred the highest return followed by Reliance Growth – Growth (0.02211), ICICI Prudential Top 100 Fund – Cumulative (0.02197), HDFC Equity Fund – Growth (0.00086) and HDFC Top 200 – Growth (0.00083). Only one scheme reported average return less than the risk free rate and of 37 schemes (59.67) showed average return less than market return. It can be observed from the table that 25 (40.32 per cent) schemes have shown superior returns than the market return and out of these 3(4.84 per cent) schemes reported higher average return than average return of sample schemes.

Table - 5.5 Average returns of Sample Mutual Fund Schemes (Sponsored Institutional)

Average Return	Bank Sponsored	Institution	Private	Total
< 0.0	0	0	0	0
> 0.0 < 0.00016	0	0	1	1
> 0.00016 < 0.00055	7	4	25	36
> 0.00055 < 0.00154	0	0	22	22
> 0.00154	0	0	3	3
Total	**7**	**4**	**51**	**62**

Average Return: Bank Sponsored- 0.00034, Institution-0.00040, Private- 0.00180.

The sample mutual fund schemes have been classified as Bank Sponsored, Institution and Private Asset management companies according to institutional classification. These asset Management companies act as the most powerful and potential tool in the hand of government to regulate, make and streamline in the market fluctuations. The performance of sample mutual fund schemes on this basis is reported in table 5.5.

The summary statistics on average performance along with the type of sponsoring institution reveals that all bank and financial institution sponsored schemes report

superior average return than the risk free rate but less than average market return. On the other hand, one private sector sponsored schemes provide average return less than risk free rate and 25 schemes less than average market return. There are 25 private schemes which outperform the market.In these schemes, 22 schemes provide less than average scheme return and 3 schemes reported more than average scheme return. The average return of private sponsored mutual fund schemes is reported as 0.00180 which is greater than institutional and bank sponsored mutual fund schemes.

Table - 5.6 Average Returns of Sample Mutual Fund Scheme (Investment Objective)

Average Return	Growth	Hybrid	Income	Total
< 0.0	0	0	0	0
> 0.0 < 0.00016	0	1	0	1
> 0.00016 < 0.00055	18	7	11	36
> 0.00055 < 0.00154	15	6	1	22
> 0.00154	3	0	0	3
Total	**36**	**14**	**12**	**62**

Average Return: Growth- 0.00238, Hybrid- 0.00043, Income - 0.00032.

In terms of investment objectives, the sample mutual fund schemes have been classified into three categories, viz., growth, and hybrid and income schemes. Growth schemes pursue investment policies which offer enormous potential for capital appreciation. These schemes have been making heavy portfolio commitment in the equities. The investment policy of income schemes focus more on regular and consistent generation of return. Investment in such portfolios has been committed to the maximum extent of debt securities. The investment of hybrid schemes has been a compromise between the aforesaid two depending upon risk perception and tolerance of management. A careful examination of result shows that out of total outperform schemes, 18 schemes are growth oriented, 6 are hybrid and only 1 scheme is income oriented. Eleven (91.66 per cent) income oriented schemes generate average return less than average market return which underperforms the market.

Investment Risk

The total investment risk of portfolio is represented by sigma (σ) which measures the variability of daily returns for each fund from average return of the concerned fund. Sigma (σ) is defined as the square root of mean of the squares of the deviations of

individual returns taken from average return. It measures the dispersion of each actual/realized portfolio return from the average of such returns.

Table - 5.7 Risk of Sample Mutual Fund Schemes

Total Risk	No. of Scheme	(%)
< 0.0	0	0
> 0.0 < 0.016335	40	64.52
> 0.016335 < 0.075282	19	30.65
> 0.075282	3	4.84
Total	**62**	**100**

Average Total Risk (Schemes) = 0.075282, Benchmark= 0.016335.

Table 5.7 exhibit that a forty schemes, (64.52 per cent) experienced less variability than the risk of market portfolio where as 22 (35.48 per cent) having the higher variability than the market risk and hence are more risky. As a result, the sample schemes demonstrate more investment risk as compared to the market risk (0.075282 > 0.016335). A detailed investigation on the total investment risk of all sample mutual fund schemes in respect to sponsorship and investment objectives are as follows:

Table - 5.8 Risk of Sample Mutual Fund Schemes (Sponsored Institutional)

Total Risk	Bank Sponsored	Institution	Private	Total
< 0.0	0	0	0	0
> 0.0 < 0.016335	3	2	35	40
> 0.016335 < 0.075282	4	2	13	19
> 0.075282	0	0	3	3
Total	**7**	**4**	**51**	**62**

Total Risk: Bank Sponsored- 0.01284, Institution-0.01336, Private- 0.08871

Private sponsored mutual fund schemes are managed by professional fund managers whose investment decision making process is governed by sole consideration of profit maximization. They commit a larger proportion of investment portfolio to risky asset in a bid to maximize return. This table shows that schemes sponsored by the banks have experienced the lowest (0.01284) average total risk than Institution (0.01336) and Private funds (0.08871). The average total risk of private sponsored scheme is higher than average total risk of market and sample schemes.

Table - 5.9 Risk of Sample Mutual Fund Schemes (Investment Objective)

Total Risk	Growth	Hybrid	Income	Total
< 0.0	0	0	0	0
> 0.0 < 0.016335	15	14	11	40
> 0.016335 < 0.075282	18	0	1	19
> 0.075282	3	0	0	3
Total	**36**	**14**	**12**	**62**

Average Total Risk: Growth- 0.12410, Hybrid- 0.01014, Income - 0.00484.

The hybrid and income schemes have outperform the market in terms of risk average total investment risk (0.016335). These schemes carry lower variability in return than those in passive benchmark portfolios. The growth schemes involve higher average total investment risk as compared to market and the other fund schemes. On the whole the analysis offer results quite consistent with the theory on the subject, relatively higher investment risk on hybrid schemes than the income schemes, may be due to greater exposure of equities in hybrid schemes. Growth oriented schemes are quite more risky as compare to hybrid and income schemes with higher investment risk due to major involvement of equities.

Null Hypothesis-1:

The investment performance of mutual fund schemes managed by asset management companies is not providing consistent risk adjusted return to unit holders in Indian capital market.

Alternate Hypothesis-1:

The investment performance of mutual fund schemes managed by asset management companies is providing consistent risk adjusted return to unit holders in Indian capital market.

Treynor and Sharpe Measure

Treynor (1965) has developed quantitative measure to evaluate investment performance of managed portfolio. It is also called the reward to volatility ratio that measures the excess return per unit of systematic risk. The Treynor ratio for the sample mutual fund schemes have been worked out by using:

$$Treynor\ Ratio = (R_p - R_f) / \beta_p$$

Sharpe (1966) measure, also known as return to variability ratio, as used to evaluate the investment performance of managed portfolio. Sharpe Ratio measures the excess return

per unit of total risk (standard deviation). Thus Sharpe ratio for sample mutual fund schemes and benchmark index estimated by using the following equation:

$$Sharpe\ Ratio = (R_p - R_f) / \sigma_p$$

The ratio may be both positive and negative value in Sharpe and Treynor measure. Its higher value indicates superior portfolio performance while the lower value implies inadequate investment performance. The value of this measure for individual funds is preferred to be compared with that of the market benchmark index to adjudicate whether it outperform or underperform the market. Any scheme registering positive significant value, its performance is to be considered superior. This measure is often used to investigate the investment performance of managed portfolio as well as to rank the portfolio in terms of performance.

Table 5.10 - Treynor and Sharpe Measure (Sample Mutual Fund Schemes vs. Benchmark Index)

Scheme Name	Treynor Ratio			Sharpe Ratio			Benchmark Index
	Fund	Benchmark	p value	Fund	Benchmark	p value	
1	-0.0018	0.0004	0.9177	0.0046	0.0257	0.7914	R
2	0.0055	0.0004	0.7485	0.0359	0.0249	0.0348*	R
3	0.0144	0.0004	0.3972	0.0197	0.0243	0.2471	O
4	0.0069	0.0004	0.6869	0.0365	0.0243	0.0323*	O
5	-1.5418	0.0004	0.0000*	0.1525	0.0254	0.0000*	R
6	-0.0362	0.0004	0.0346*	0.0471	0.0255	0.0060*	R
7	-1.9811	0.0004	0.0000*	0.0681	0.0255	0.0001*	R
8	0.0068	0.0004	0.6897	0.0139	0.0228	0.4151	A
9	0.0307	0.0003	0.0709	0.0482	0.0247	0.0045*	E
10	0.0195	0.0004	0.2570	0.0821	0.0255	0.0000*	R
11	0.0017	0.0002	0.9216	0.0133	0.0080	0.4353	S
12	-0.1822	0.0004	0.0000*	0.0532	0.0248	0.0017*	R
13	-0.3384	0.0004	0.0000*	0.0533	0.0248	0.0017*	R
14	0.0285	0.0004	0.0941	0.0397	0.0251	0.0196*	R
15	1.5419	0.0004	0.0000*	0.0760	0.0255	0.0000*	R
16	-0.0766	0.0004	0.0000*	0.0178	0.0255	0.2991	R
17	0.0073	0.0004	0.6700	0.0410	0.0253	0.0162*	R
18	0.0043	0.0004	0.8025	0.0224	0.0244	0.1890	O
19	0.0074	0.0004	0.6653	0.0424	0.0230	0.0131*	A
20	0.0021	0.0003	0.9037	0.0130	0.0106	0.4452	P

21	0.0052	0.0004	0.7611	0.0397	0.0255	0.0206*	R
22	0.0157	0.0004	0.3596	0.0516	0.0255	0.0026*	R
23	0.0160	0.0004	0.3469	0.0474	0.0229	0.0054*	A
24	0.1169	0.0004	0.0000*	0.0656	0.0250	0.0001*	R
25	0.0465	0.0004	0.0064*	0.0621	0.0250	0.0003*	R
26	0.0120	0.0004	0.4820	0.0334	0.0229	0.0499*	A
27	0.0073	0.0004	0.6665	0.0448	0.0243	0.0086*	O
28	0.0244	0.0004	0.1528	0.0308	0.0251	0.0710	R
29	0.1387	0.0005	0.0000*	0.0522	0.0330	0.0022*	C
30	0.0101	0.0003	0.5536	0.0193	0.0106	0.2584	P
31	-0.0240	0.0004	0.1596	0.0172	0.0248	0.3132	F
32	0.0150	0.0004	0.3811	0.0318	0.0245	0.0624	O
33	0.0036	0.0004	0.8344	0.0083	0.0245	0.6281	O
34	0.0384	0.0004	0.0253*	0.0645	0.0256	0.0002*	R
35	-0.0082	0.0004	0.6293	0.0051	0.0250	0.7651	R
36	0.0099	0.0004	0.5597	0.0144	0.0251	0.3978	R
37	0.0066	0.0004	0.6972	0.0273	0.0248	0.1094	F
38	-0.0014	0.0004	0.9912	-0.0002	0.0251	0.9912	R
39	0.4122	0.0004	0.0000*	0.0713	0.0248	0.0000*	R
40	0.0221	0.0004	0.1972	0.0328	0.0255	0.0556	R
41	0.0010	0.0004	0.9510	0.0016	0.0248	0.9249	R
42	-0.0969	0.0004	0.0000*	0.0359	0.0255	0.0365*	R
43	-0.0454	0.0004	0.0082*	0.0183	0.0256	0.2871	R
44	0.0060	0.0004	0.7273	0.0182	0.0256	0.2894	R
45	0.0093	0.0004	0.5880	0.0109	0.0256	0.5256	R
46	0.0134	0.0004	0.4348	0.0247	0.0254	0.1485	R
47	-0.0775	0.0004	0.0000*	0.0232	0.0249	0.1740	F
48	-0.0266	0.0004	0.1154	0.0172	0.0226	0.3089	N
49	-0.2263	0.0004	0.0000*	0.0455	0.0226	0.0071*	N
50	0.0603	0.0004	0.0004*	0.0160	0.0255	0.3500	R
51	0.0127	0.0004	0.4611	0.0105	0.0252	0.5414	F
52	0.0060	0.0004	0.7271	0.0176	0.0249	0.3066	O
53	0.0120	0.0004	0.4853	0.0074	0.0231	0.6659	N
54	0.0054	0.0004	0.7529	0.0264	0.0245	0.1221	O
55	0.0205	0.0004	0.2305	0.0340	0.0253	0.0469*	R
56	0.0242	0.0004	0.1562	0.0186	0.0254	0.2763	R
57	0.0064	0.0004	0.7095	0.0347	0.0254	0.0425*	R
58	0.0021	0.0004	0.9026	0.0044	0.0254	0.7984	R
59	-0.0231	0.0004	0.5777	-	0.0253	0.5777	R

				0.0095			
60	0.0231	0.0004	0.1803	0.0273	0.0234	0.1131	N
61	0.0066	0.0004	0.6982	0.0170	0.0251	0.3188	R
62	0.0098	0.0004	0.5642	0.0278	0.0244	0.1028	O
Average	**-0.0305**	**0.0004**		**0.0327**	**0.0242**		
Standard Deviation	0.3855	0.0000		0.0256	0.0036		
Maximum	1.5419	0.0005		0.1525	0.0330		
Minimum	-1.9811	0.0002		-0.0095	0.0080		

Source: Compile from daily return of the sample mutual fund schemes taken from SEBI and benchmark return taken from their respective website.
Note- P value at 5 per cent *level of significance.* indicate the significant value.*

Table 5.10 reveals the value of Treynor and Sharpe Ratio of sample mutual funds and benchmark index along with the significance p value of sample mutual fund schemes. It was found that 15 (24.19 per cent) out of 62 schemes showed the negative value in terms of Treynor ratio and rest of the schemes (75.81 per cent) generate the positive value. Treynor ratio shows that the 16 (25.80 per cent) out of 62 schemes under performs the market and rest of the 46 (74.20 per cent) schemes out performs the market in terms of Treynor ratio. In terms of Treynor Value DSP Black Rock Bond Fund - Retail Plan – Growth (Scheme no. 15) has the highest value.

It can also be examine from the table that Sharpe ratio of the 60 sample mutual fund schemes have the positive (96.78 per cent) Sharpe value except two (3.22 per cent) schemes, indicating that vast majority of sample mutual fund schemes have produced greater return as compare to risk free rate. It is found that 25 out of 62 schemes underperform and rest of the 37 schemes over performs the market in terms of Sharpe ratio. Sharpe Ratio provides the better picture as the fund Birla Sun Life Gilt plus Liquid Plan- Growth (Scheme No. 5) gave the highest Sharpe value in all the sample schemes.

Table - 5.11 Treynor Measures of Sample Mutual Fund Schemes

Treynor Ratio	No. of Scheme	(%)
< -0.0305	9	14.52
> -0.0305 < 0.0	7	11.29
> 0.0 < 0.00039	0	0.00
> 0.00039	46	74.19
Total	**62**	**100**

Average Treynor Ratio: Schemes = -0.03051, Market = 0.00039

It can be observed from the Table 5.11 that average Treynors performance of sample mutual fund schemes (-0.03051) have found to be negative and average Treynor'ratio of benchmark index (0.00039) have shown positive value. It may be noted that 25.81 per cent (16 schemes) showed the negative treynor's performance ratio which underperform the market and rest of 74.19 per cent (46 schemes) showed the positive treynor ratio which over perform the market. The highest loser is Birla Sun Life Income Plus – Growth (-1.981068) and the highest gainer is DSP Black Rock Bond Fund - Retail Plan – Growth (1.541906) among all the sample schemes in terms of Treynor ratio within the study period.

Table - 5.12 Treynor Measures of Sample Mutual Fund Schemes (Sponsorship Institutional)

Treynor Ratio	Bank Sponsored	Institution	Private	Total
< -0.0305	2	2	5	9
> -0.0305 < 0.0	1	0	6	7
> 0.0 < 0.00039	0	0	0	0
> 0.00039	4	2	40	46
Total	**7**	**4**	**51**	**62**

Average Treynor Ratio: Bank Sponsored = -0.061638, Institution = -0.03175, Private = 1.54190

It may be observed that incidence of negative performance evenly distributed across different sponsorship categories. The proportion of funds with this negative performance level is 42.85 per cent in bank sponsored, 50 per cent in institution and 21.56 per cent in private sector sponsored asset management companies. Contrary to this observation majority of private sponsored mutual fund schemes (41) showed the positive performance in terms of treynor ratio and all of these schemes outperformed the average market treynor ratio. This table also draws an important conclusion that average treynor ratio of bank sponsored and institution mutual fund schemes witnessed negative value where

sample mutual schemes of private sponsored companies showed a comparatively higher positive average treynor ratio. The result in this regard is positive among all categories of sponsorship; the private sector sponsor sample funds have experienced the highest positive incidence in terms of Treynor ratio.

Table - 5.13 Treynor Measures of Sample Mutual Fund Schemes (Investment Objective)

Treynor Ratio	Growth	Hybrid	Income	Total
< -0.0305	3	1	5	9
> -0.0305 < 0.0	3	3	1	7
> 0.0 < 0.00039	0	0	0	0
> 0.00039	30	10	6	46
Total	**36**	**14**	**12**	**62**

Average Treynor Ratio: Growth= 0.000630, Hybrid= -0.00941, Income = -0.14852.

Table 5.13 shows that some of the sample mutual fund schemes have observed negative Treynor value across all the categories of investment objectives. On the other hand 83.33 per cent of growth schemes, 71.42 per cent of the hybrid schemes and 50 per cent of the income schemes have exhibited the positive treynor value. In terms of average performance the growth funds (0.000630) have fared well followed by the Hybrid schemes (-0.00941) and Income schemes (-0.14852).

Table - 5.14 Testing of Hypothesis (Treynor Measure)

Treynor Measure	Significant		Insignificant		Total
	Positive	Negative	Positive	Negative	
Institutional					
Bank Sponsored	1	2	3	1	7
Institutional		2	2	0	4
Private	6	6	34	5	51
Total	7	10	39	6	62
Objective					
Growth	1	3	29	3	36
Hybrid	2	1	8	3	14
Income	4	6	2	0	12
Total	7	10	39	6	62

Source: Researcher Compilation

Table 5.14 reveals the result of the hypothesis of treynor measure. It can be observed from the table that only 17 sample mutual fund schemes are significant at five per cent level of significance out of which 7 (11.29 per cent) are showing positive treynor

measure value and 10 (16.12 per cent) schemes are showing negative value. Rest of the 45 (72.58 per cent) schemes is insignificant. In terms of sponsored institution, the bank sponsored asset management companies have 1 (14.28 per cent) schemes, Institutional have no scheme and private sponsored have 7 (85.71 per cent) schemes in positive significant schemes. In terms of investment objective, 1 (14.28 per cent) growth schemes, 2 (28.56 per cent) hybrid schemes, 4 (57.12 per cent) income schemes are found to be positive and significant. From these results it can be interpreted that only 7 (11.29 per cent) of the sample mutual fund schemes are reflect the significant positive relative risk adjusted return in terms of Treynor measure.

Table - 5.15 Sharpe Measures of Sample Mutual Fund Schemes

Sharpe Ratio	No. of Scheme	(%)
< 0.0	2	3.23
> 0.0 < 0.024204	25	40.32
> 0.024204 < 0.032704	7	11.29
> 0.032704	28	45.16
Total	**62**	**100**

Average Sharpe Ratio: Schemes- 0.032704, Benchmark- 0.024204

It is revealed from the Table 5.15 that 43.55 (27 schemes) per cent of the sample schemes have registered performance below the average market portfolio in terms of Sharpe's measure, the remaining 56.45 (35 schemes) per cent having experienced superior performance. However in the case of 30.23 (2 schemes) per cent experienced negative Sharpe ratio and 45.16 (28 schemes) per cent experienced Sharpe ratio excess than average Sharpe ratio of sample mutual fund schemes. Top 5 performers in terms of Sharpe's ratio are Birla Sun Life Gilt Plus Liquid Plan – Growth (0.152525), Birla Sun Life Monthly Income Plan – Growth (0.082121), DSP Black Rock Bond Fund - Retail Plan – Growth (0.076008), Kotak Bond Deposit – Growth (0.071283) and Birla Sun Life Income Plus – Growth (0.068088).

Table - 5.16 Sharpe Measures of Sample Mutual Fund Schemes (Sponsorship Institutional)

Sharpe Ratio	Bank Sponsored	Institution	Private	Total
< 0.0	0	0	2	2
> 0.0 < 0.024204	5	3	17	25
> 0.024204 < 0.032704	0	0	7	7
> 0.032704	2	1	25	28
Total	**7**	**4**	**51**	**62**

Average Sharpe Ratio: Bank Sponsored = 0.023218, Institution = 0.020813, Private = 0.034939

Table 5.16 summarizes the result along with summary performance measures (average) for variously sponsored funds. The table shows that 19 schemes of the private sponsored funds, 5 schemes from bank sponsored and 3 schemes from institution have shown inferior to the average benchmark portfolio in terms of Sharpe ratio. All the schemes which generate negative Sharpe ratio belong to Private sponsored mutual fund schemes. On the other hand 32 schemes of the private sponsored funds, 2 schemes from bank sponsored and 1 scheme from institution have shown positive superior performance. The average Sharpe ratio of private sponsored (0.034939) mutual fund schemes found positive than average Sharpe ratio of mutual fund schemes of Bank Sponsored (0.023218) and Institution sponsored (0.020813).

Table - 5.17 Sharpe Measures of Sample Mutual Fund Schemes (Investment Objective)

Sharpe Ratio	Growth	Hybrid	Income	Total
< 0.0	0	2	0	2
> 0.0 < 0.024204	21	2	2	25
> 0.024204 < 0.032704	5	2	0	7
> 0.032704	10	8	10	28
Total	**36**	**14**	**12**	**62**

Average Sharpe Ratio: Growth= 0.024332, Hybrid= 0.033239, Income= 0.057196.

Table 5.17 shows the excess return in terms of variability of return in relation to the investment objectives of the sample mutual fund schemes. It is evident that 21 growth schemes, 4 of hybrid and 2 income schemes have registered inferior performance in terms of Sharpe measure. In contrast 15 of growth schemes, 10 of hybrid schemes and 10 income schemes have registered superior performance than the average benchmark

Sharpe ratio. In terms of average performance the income funds have done remarkably well as compared to the growth and hybrid schemes.

Table - 5.18 Testing of Hypothesis (Sharpe Measure)

Sharpe Measure	Significant		Insignificant		Total
	Positive	Negative	Positive	Negative	
Sponsored Institution					
Bank Sponsored	2	0	5	0	7
Institutional	1	0	3	0	4
Private	24	0	25	2	51
Total	27	0	33	2	62
Investment Objective					
Growth	10	0	26	0	36
Hybrid	8	0	4	2	14
Income	9	0	3	0	12
Total	27	0	33	2	62

Source: Researcher Compilation

Table 5.18 reveals the result of the hypothesis. It can be observed from the table that only 27 sample mutual fund schemes (43.54 per cent) are found to be positive and significant at five per cent level of significance out of 62 schemes. Rest of the 35 schemes is insignificant. In terms of sponsored institution, the bank sponsored asset management companies have 2 (7.40 per cent) schemes, Institutional have 1 (3.70 per cent) scheme and private sponsored have 24 (88.88 per cent) schemes positive and significant. In terms of investment objective, 10 (37.03 per cent) growth schemes, 8 (29.62 per cent) hybrid schemes, 9 (33.33 per cent) income schemes are found to be positive and significant. From these results it can be interpreted that 27 schemes (43.54 per cent) of the sample mutual fund schemes have shown significant and positive relative risk adjusted return in terms of Sharpe measure.

Jensen Selectivity Measure

Jensen (1968) has added a different dimension to the portfolio performance evaluation. He has focused on evaluation of a portfolio manager's ability to successfully predict security prices which yield higher returns. Jensen's measure not only enables us to calculate the differential actual and expected earnings but also helps the analyst to determine whether the differential return has occurred by chance and is significantly different from zero. It may be noted that both Treynor and Sharpe ratio are relative

measure of performance. However the differential return measures of Jensen ratio are the absolute measures of the performance and reflect whether the fund manager are able to generate returns in excess of equilibrium returns. The Jensen ratio may be specified as under:

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \varepsilon_t$$

where,

R_p = *Average return of the sample mutual fund schemes*

R_f = *Risk free returns,*

R_m = *Return of the benchmark index*

ε_t= *Random error term and* α *and* β *are the parameter of the model.*

Alpha is a measure of differential return earned by the schemes while beta measures the systematic risk of the schemes. The parameters of the model have been estimated by the standard regression techniques. The significant positive alpha will reflect the superior performance.

Table - 5.19 Result of Jensen Measure

Scheme No.	Fund Return	CAPM Return	Alpha	p- value
1	0.00024	0.00014	0.00010	0.01700*
2	0.00057	0.00019	0.00038	0.00000*
3	0.00047	0.00017	0.00031	0.19600
4	0.00063	0.00019	0.00044	0.00000*
5	0.00029	0.00016	0.00013	0.09280
6	0.00033	0.00016	0.00017	0.22400
7	0.00033	0.00016	0.00017	0.96500
8	0.00039	0.00017	0.00022	0.05500
9	0.00068	0.00017	0.00052	0.20200
10	0.00037	0.00017	0.00021	0.00000*
11	0.00048	0.00019	0.00029	0.00000*
12	0.00033	0.00016	0.00017	0.78400
13	0.00033	0.00016	0.00017	0.88600
14	0.00056	0.00017	0.00040	0.19000
15	0.00029	0.00016	0.00013	0.98200
16	0.00060	0.00016	0.00044	0.83100
17	0.00076	0.00019	0.00057	0.00000*
18	0.00055	0.00020	0.00035	0.00000*
19	0.00075	0.00019	0.00056	0.00000*

20	0.00042	0.00019	0.00023	0.00000*
21	0.00057	0.00019	0.00038	0.00000*
22	0.00048	0.00017	0.00031	0.00200*
23	0.00086	0.00018	0.00068	0.00600*
24	0.00031	0.00016	0.00015	0.59500
25	0.00079	0.00017	0.00063	0.20600
26	0.00071	0.00018	0.00053	0.00900*
27	0.00083	0.00020	0.00063	0.00000*
28	0.00054	0.00017	0.00037	0.23200
29	0.00076	0.00016	0.00060	0.75000
30	0.00050	0.00017	0.00033	0.00700*
31	0.02197	-0.00020	0.02217	0.50200
32	0.00067	0.00017	0.00050	0.04400*
33	0.00033	0.00018	0.00015	0.02800*
34	0.00031	0.00016	0.00015	0.11800
35	0.00024	0.00016	0.00008	0.55900
36	0.00040	0.00017	0.00023	0.17000
37	0.00057	0.00019	0.00038	0.00000*
38	0.00016	0.00016	0.00000	0.89300
39	0.00032	0.00016	0.00016	0.88200
40	0.00023	0.00016	0.00007	0.88200
41	0.00017	0.00017	0.00001	0.14700
42	0.00033	0.00016	0.00017	0.73700
43	0.00046	0.00016	0.00030	0.71000
44	0.00046	0.00018	0.00028	0.00500*
45	0.00033	0.00017	0.00016	0.27800
46	0.00044	0.00017	0.00027	0.08500
47	0.00053	0.00016	0.00037	0.77600
48	0.02211	-0.00014	0.02225	0.53400
49	0.00082	0.00016	0.00066	0.84200
50	0.00037	0.00016	0.00020	0.80800
51	0.00034	0.00017	0.00017	0.43700
52	0.00046	0.00018	0.00028	0.00600*
53	0.00030	0.00017	0.00014	0.54800
54	0.00058	0.00019	0.00038	0.00000*
55	0.00056	0.00017	0.00039	0.12300
56	0.00048	0.00017	0.00032	0.47600
57	0.00070	0.00019	0.00051	0.00000*
58	0.00024	0.00018	0.00007	0.05200
59	0.00004	0.00016	-0.00012	0.69600
60	0.00062	0.00017	0.00045	0.25300

61	0.02366	0.00160	0.02206	0.01500*
62	0.00065	0.00018	0.00047	0.00700*
Average	0.00154	0.00018	0.00136	0.30395
Standard Deviation	0.00479	0.00019	0.00473	0.34113
Maximum	0.02366	0.00160	0.02225	0.98200
Minimum	0.00004	-0.00020	-0.00012	0.00000

Source: Compile from daily return of the sample mutual fund schemes taken from SEBI and benchmark return taken from their respective website.
Note- P value at 5 per cent level of significance. indicate the significant value.*

Table 5.19 reveals the fund return, CAPM return, Alpha value and significance p value by using Jensen measure. Jensen Models suggests that 61 schemes have provided excess returns over CAPM returns against the fact that all the schemes provided excess returns over the risk free rates. Reliance Growth Scheme - Growth, with α= 0.02225, indicating a positive highest investment capabilities and Tata Young Citizens Fund α= (-0.00012) which showed a negative performance. Statistically significant positive value of α indicates superior investment performance of mutual funds.

Table - 5.20 Jensen Measures of Sample Mutual Fund Schemes

Jensen	No. of Scheme	(%)
< 0.0	1	1.61
> 0.0 < 0.00136	58	93.55
> 0.00136	3	4.84
Total	**62**	**100**

Average Jensen Measure = 0.00136

Table 5.20 shows the investment performance of sample mutual fund schemes examined in terms of Jensen's α. It may be observed that 61 out of 62 (98.38 per cent) have positive value of α values in Jensen's performance evaluation except Tata Young Citizens Fund. It indicates superior performance of these schemes. Of these, Reliance Growth – Growth (0.02225), ICICI Prudential Top 100 Fund – Cumulative (0.02217),Taurus Discovery Fund – Growth (0.02206) are the top three performs which generate the α value more than average of alpha value of all mutual fund schemes. The average investment performance is found to have positive value of α which also validates that asset

management companies in India collectively able to outperform the market portfolio indicating that investors are benefited through this investment mechanism.

Table - 5.21 Jensen Measures of Sample Mutual Fund Schemes (Sponsorship Institutional)

Jensen	Bank Sponsored	Institution	Private	Total
< 0.0	0	0	1	1
> 0.0 < 0.00136	7	4	47	58
> 0.00136	0	0	3	3
Total	**7**	**4**	**51**	**62**

Average Jensen Measure: Bank Sponsored = 0.00018, Institution = 0.00023, Private = 0.00161

Jensen's α value as reported in table 5.21 explain successively higher incidence of positive α in the investment performance of asset management companies across all sponsoring categories. A significant majority of funds in the Bank Sponsored (100 per cent), Institution (100 per cent), and Private sector (98.04 per cent) funds have positive alpha values. On the contrary only one private sector scheme reported negative alpha value.

Table - 5.22 Jensen Measures of Sample Mutual Fund Schemes (Investment Objective)

Jensen	Growth	Hybrid	Income	Total
< 0.0	0	1	0	1
> 0.0 < 0.00136	33	13	12	58
> 0.00136	3	0	0	3
Total	**36**	**14**	**12**	**62**

Average Jensen Measure: Growth= 0.00219, Hybrid= -0.00026, Income = 0.00016.

Table 5.22 represents Jensen's α value according to different objectives of the schemes. It reveals that incidence of negative α value is lying in the category of hybrid scheme in only one scheme. It can be observed that 33 of the growth schemes, 13 of hybrid schemes and 12 of income schemes have positive alpha but less than average α (0.00136) value of all the schemes. Only 3 (8.33 per cent) reported excess alpha value than average alpha of all sample mutual funds schemes.

Table - 5.23 Testing of Hypothesis (Jensen Measure)

Jensen Measure	Significant		Insignificant		Total
	Positive	Negative	Positive	Negative	
Institutional					
Bank Sponsored	2	0	5	0	7
Institutional	1	0	3	0	4
Private	21	0	29	1	51
Total	**24**	0	37	1	62
Investment Objective					
Growth	20	0	16	0	36
Hybrid	4	0	9	1	14
Income	0	0	12	0	12
Total	**24**	0	37	1	62

Source: Researcher Compilation

The value of alpha is the measure of selectivity skills of the asset managers. The table 5.23 reveals the result of the hypothesis of Jensen measure. It can be observed from the table that only 24 (38.70 per cent) sample mutual fund schemes are significant at five per cent level of significance and shows the positive alpha value. Rest of the 38 (61.30 per cent) schemes is statistically insignificant. In terms of sponsored institution, the bank sponsored asset management companies have 2 (8.33 per cent) schemes, Institutional have 1 (4.17 per cent) schemes and private sponsored have 21 (87.5 per cent) schemes in positive significant alpha value. In terms of investment objective, 20 (83.33 per cent) growth schemes, 4 (16.67 per cent) hybrid schemes, no income schemes are found to be positive and significant. From these results it can be interpreted that 24 schemes (38.71 per cent) of the sample mutual fund schemes are reflect the significant positive selectivity skills by predicting the future prices using the Jensen Measure during the study period.

Fama Net Selectivity Measure

Fama (1972) analyzes the performance of mutual fund schemes and develop the components of investment performance measures. In terms of Fama's framework, portfolio returns constitutes the following four components:

Risk Free Rate of Reurn (R_f)
Risk Premium $[\beta(R_m - R_f)]$
Diversification $[R_m\text{-}R_f] - [(\sigma_p/\sigma_m) - \beta]$
Net Selectivity $[R_p\text{-}R_f] - [(\sigma_p/\sigma_m)\ (R_m\text{-}R_f)]$

The relationship of diversification and net selectivity can be expressed as:

Net Selectivity= Selectivity+ Diversification

Table - 5.24 Result of Fama Net Selectivity Measure

Scheme Name	Risk Free Rate	Risk Premium	Diversification	Selectivity	Net Selectivity
1	0.00016	-0.00002	0.00046	0.00010	-0.00037
2	0.00016	0.00003	0.00025	0.00038	0.00012
3	0.00016	0.00001	0.00038	0.00031	-0.00007
4	0.00016	0.00003	0.00029	0.00044	0.00016
5	0.00016	0.00000	0.00002	0.00013	0.00011
6	0.00016	0.00000	0.00009	0.00017	0.00008
7	0.00016	0.00000	0.00006	0.00017	0.00011
8	0.00016	0.00001	0.00037	0.00022	-0.00015
9	0.00016	0.00001	0.00026	0.00052	0.00025
10	0.00016	0.00000	0.00006	0.00021	0.00015
11	0.00016	0.00003	0.00016	0.00029	0.00013
12	0.00016	0.00000	0.00008	0.00017	0.00009
13	0.00016	0.00000	0.00008	0.00017	0.00009
14	0.00016	0.00001	0.00025	0.00040	0.00015
15	0.00016	0.00000	0.00004	0.00013	0.00009
16	0.00016	0.00000	0.00063	0.00044	-0.00019
17	0.00016	0.00003	0.00034	0.00057	0.00023
18	0.00016	0.00004	0.00039	0.00035	-0.00003
19	0.00016	0.00003	0.00029	0.00056	0.00027
20	0.00016	0.00003	0.00018	0.00023	0.00005
21	0.00016	0.00003	0.00023	0.00038	0.00015
22	0.00016	0.00001	0.00015	0.00031	0.00016
23	0.00016	0.00002	0.00032	0.00068	0.00036
24	0.00016	0.00000	0.00006	0.00015	0.00009
25	0.00016	0.00001	0.00025	0.00063	0.00038
26	0.00016	0.00002	0.00036	0.00053	0.00017
27	0.00016	0.00004	0.00033	0.00063	0.00030
28	0.00016	0.00001	0.00030	0.00037	0.00007
29	0.00016	0.00000	0.00038	0.00060	0.00022
30	0.00016	0.00001	0.00018	0.00033	0.00015
31	0.00016	-0.00036	0.03186	0.02217	-0.00969
32	0.00016	0.00001	0.00038	0.00050	0.00012
33	0.00016	0.00002	0.00047	0.00015	-0.00032
34	0.00016	0.00000	0.00006	0.00015	0.00009
35	0.00016	0.00000	0.00038	0.00008	-0.00030
36	0.00016	0.00001	0.00041	0.00023	-0.00018

37	0.00016	0.00002	0.00035	0.00038	0.00004
38	0.00016	0.00000	0.00032	0.00000	-0.00032
39	0.00016	0.00000	0.00006	0.00016	0.00010
40	0.00016	0.00000	0.00006	0.00007	0.00002
41	0.00016	0.00000	0.00018	0.00001	-0.00018
42	0.00016	0.00000	0.00012	0.00017	0.00005
43	0.00016	0.00000	0.00042	0.00030	-0.00012
44	0.00016	0.00002	0.00040	0.00028	-0.00012
45	0.00016	0.00001	0.00040	0.00016	-0.00023
46	0.00016	0.00001	0.00028	0.00027	-0.00001
47	0.00016	0.00000	0.00040	0.00037	-0.00003
48	0.00016	-0.00030	0.02909	0.02225	-0.00684
49	0.00016	0.00000	0.00033	0.00066	0.00033
50	0.00016	0.00000	0.00032	0.00020	-0.00012
51	0.00016	0.00001	0.00043	0.00017	-0.00025
52	0.00016	0.00002	0.00040	0.00028	-0.00012
53	0.00016	0.00000	0.00044	0.00014	-0.00030
54	0.00016	0.00003	0.00035	0.00038	0.00003
55	0.00016	0.00001	0.00029	0.00039	0.00010
56	0.00016	0.00001	0.00043	0.00032	-0.00012
57	0.00016	0.00003	0.00036	0.00051	0.00014
58	0.00016	0.00002	0.00046	0.00007	-0.00040
59	0.00016	0.00000	0.00031	-0.00012	-0.00043
60	0.00016	0.00001	0.00039	0.00045	0.00007
61	0.00016	0.00144	0.03329	0.02206	-0.01122
62	0.00016	0.00002	0.00041	0.00047	0.00006
Average	0.00016	0.00002	0.00179	0.00136	**-0.00043**
Standard Deviation	0.00000	0.00019	0.00675	0.00473	0.00205
Maximum	0.00016	0.00144	0.03329	0.02225	0.00038
Minimum	0.00016	-0.00036	0.00002	-0.00012	-0.01122

Source: Compile from daily return of the sample mutual fund schemes taken from SEBI and benchmark return taken from their respective website.

Table 5.24 gives the information pertaining to Fama measure for the sample mutual fund schemes. The component wise result of Fama measure is discusses below-

Performance of Risk

Performance of the risk assesses the return being generated by the fund manager due to their decision to take the risk. They assume risk in the hope of generating the extra returns on their portfolio. An examination of the Fama measure result in Table 5.24 shows that except for 3 schemes, the other 59 schemes exhibit positive performance on account of risk bearing activity of fund managers. The Taurus Discovery Fund mutual fund (0.00144) scheme has the highest positive performance and the lowest is of ICICI Prudential Top 100 Fund (0.00036) among the sample mutual fund schemes.

Performance of Diversification

Performance can be attributed to diversification and net selectivity. The diversification measures the additional return that compensates the portfolio managers for bearing diversifiable risk. Therefore an attempt has been made to examine manager's performance on diversification. Table 5.24 showed that all the sample mutual fund schemes were earned positive return for its diversification activities. Again the Taurus Discovery Fund scheme has the highest positive performance among the sample mutual fund schemes. The majority of positive incidence of return on risk premium and diversification imply that return of mutual fund scheme was more than the risk free rate during the study period.

Performance of Net Selectivity

After accounting for diversification, the residual return performance on selectivity is attributed to net selectivity. A positive net selectivity value will indicate superior performance and in case of negative value implies that fund manager have taken diversifiable risk that has not been compensated by extra returns. Table 5.24 exhibited the net selectivity front 25 schemes (40.32 per cent) have shown negative return and the rest 37 scheme (59.68 per cent) have reported positive net selectivity indicating superior stock selection of the asset management companies. The average net selectivity is negative for all sample mutual fund schemes (-0.00043), this would imply that that fund managers of 37 schemes were able to get some additional compensation for their diversification activities.

Table - 5.25 Fama Net Selectivity Measures of Sample Mutual Fund Schemes

Fama Measure	No. of Scheme	(%)
< -0.00043	3	4.84
> -0.00043 < 0.0	22	35.48
> 0.0	37	59.68
Total	**62**	**100**

Average Fama Measure: Schemes = -0.00043.

Table 5.25 showed the analysis of net selectivity performance of sample mutual fund schemes with comparing it with average Fama net selectivity value of all the sample. The average Fama value of all sample mutual fund schemes found to be negative (-0.00043). It is clearly indicate that 40.32 per cent of the schemes have negative Fama value. The majority of schemes (59.68 per cent) experienced positive Fama value. The Taurus Discovery Fund – Growth (-0.01122) reported the worst mutual fund scheme and HDFC Prudence Fund – Growth (0.00038) reported the best scheme in term of overall performance of Fama followed by HDFC Equity Fund – Growth (0.00036), Reliance Vision – Growth (0.00033), HDFC Top 200 – Growth (0.00030) and Franklin India Prima Plus – Growth (0.00027).

Table - 5.26 Fama Net Selectivity Measures of Sample Mutual Fund Schemes (Sponsorship Institutional)

Fama Measure	Bank Sponsored	Institution	Private	Total
< -0.00043	0	0	3	3
> -0.00043 < 0.0	5	3	14	22
> 0.0	2	1	34	37
Total	**7**	**4**	**51**	**62**

Average Fama Measure: Bank Sponsored = -0.000140, Institution = -0.000106, Private = -0.000498.

Table 5.26 shows the institutional classification wise net selectivity performance of Fama of all sample mutual fund schemes. The average Fama value of all categories of sponsorship experienced the negative value. The Fama value of 5 bank sponsored mutual fund schemes (71.43 per cent), 4 of Institutions schemes (75 per cent) and 17 of private sector schemes (27.45 per cent) reported to be negative. The majority of private sector schemes (72.55 per cent) witnessed positive Fama value in 34 schemes while it is very limited in bank sponsored (28.57 per cent) and institution (25 per cent).

Table - 5.27 Fama Net Selectivity Measures of Sample Mutual Fund Schemes (Investment Objective)

Fama Measure	Growth	Hybrid	Income	Total
< -0.00043	3	0	0	3
> -0.00043 < 0.0	15	5	2	22
> 0.0	18	9	10	37
Total	**36**	**14**	**12**	**62**

Average Fama Measure: Growth = -0.0007631, Hybrid= -0.00026, Income = 0.0000378.

Table 5.27 represents the net selectivity Fama value according to different investment objective of the mutual fund schemes. It can be observed that 18 out of 36 Growth schemes (50 per cent), 9 out of 14 hybrid schemes (64.28 per cent) and 10 out of 12 income schemes (83.33 per cent) witnessed positive value. So 37 schemes out of 62 show positive Fama net selectivity value. There are three schemes (Taurus Discovery Fund – Growth, ICICI Prudential Top 100 Fund – Cumulative and Reliance Growth – Growth) which generate Fama value less than average Fama value of all sample mutual fund schemes. The average of sample income schemes (0.0000378) is positive and lead the category of investment objective followed by sample hybrid schemes (-0.00026) and sample growth schemes (-0.0007631).

5.3 MARKET TIMING ABILITIES OF ASSET MANAGEMENT COMPANIES

To test the market-timing abilities of the Indian fund managers, two models proposed by Treynor & Mazuy (1966) and Henriksson & Merton (1981) have been utilized.

Null Hypothesis-2:

The asset management companies in India are not having any specific investment strategy to time the market.

Alternate Hypothesis-2:

The asset management companies in India are having specific investment strategy to time the market.

Treynor & Mazuy Market Timing Model

Treynor and Mazuy (1966) have suggested that to examine the market timing abilities of fund managers a quadratic or squared term should be added to the excess return version of the market model. The model is specified as

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,(R_m - R_f)^2 + \varepsilon_{pt}$$

where,

R_p= *denotes the average return of the mutual fund scheme,*

R_m= *denotes the average return of market or benchmark index,*

R_f= *denotes the average return on risk-free assets,*

α, β *and* γ *are the parameter of the model.*

ε_{pt} = *denotes to the error term.*

α, β, γ are the parameters of the model and can be estimated by the quadratic regression technique while all other symbols have their usual meanings. According to Treynor and Mazuy,γ is the measure of market timing. A significantly positive value of γ denotes the presence of market timing ability.

Table - 5.28 Result of Treynor & Mazuy Model of Sample Mutual Fund Schemes

Scheme No.	Stock Selection Coefficient		Market Timing Coefficient		R^2
	α	p (α)	γ	p (γ)	
1	0.000	0.182	-0.282	0.389	0.002
2	0.000	0.940	-0.496	0.038	0.012
3	0.000	0.801	-0.667	0.050	0.002
4	0.000	0.208	-0.481	0.069	0.008
5	0.000	0.000	0.025	0.154	0.001
6	0.000	0.000	0.021	0.788	0.000
7	0.000	0.000	0.158	0.003	0.003
8	0.000	0.568	-0.591	0.104	0.002
9	0.000	0.617	-0.705	0.035	0.002
10	0.000	0.000	0.063	0.249	0.005
11	0.000	0.689	0.021	0.946	0.029
12	0.000	0.000	-0.032	0.641	0.000
13	0.000	0.000	-0.010	0.879	0.000
14	0.000	0.315	0.102	0.638	0.001
15	0.000	0.000	0.061	0.101	0.001
16	0.000	0.834	-0.111	0.840	0.000
17	0.000	0.548	-0.402	0.204	0.009

18	0.000	0.680	-0.120	0.744	0.007
19	0.000	0.674	-0.225	0.460	0.009
20	0.000	0.987	-0.437	0.029	0.025
21	0.000	0.930	-0.613	0.006	0.017
22	0.000	0.067	-0.147	0.278	0.003
23	0.000	0.611	0.059	0.855	0.002
24	0.000	0.000	0.162	0.000	0.004
25	0.000	0.499	-0.181	0.380	0.001
26	0.000	0.669	0.497	0.166	0.003
27	0.000	0.847	0.273	0.368	0.010
28	0.000	0.500	-0.140	0.567	0.001
29	0.000	0.625	-0.297	0.420	0.000
30	0.000	0.537	-0.697	0.000	0.007
31	0.022	0.331	-2.904	0.904	0.000
32	0.000	0.983	-0.138	0.687	0.001
33	0.000	0.552	-0.679	0.109	0.002
34	0.000	0.000	-0.016	0.754	0.001
35	-0.001	0.041	0.231	0.467	0.000
36	0.000	0.527	-0.488	0.172	0.001
37	0.000	0.957	-0.507	0.095	0.005
38	0.000	0.070	-0.576	0.026	0.001
39	0.000	0.000	-0.042	0.377	0.000
40	0.000	0.000	-0.042	0.377	0.000
41	-0.001	0.000	-0.038	0.814	0.001
42	0.000	0.000	-0.130	0.209	0.000
43	0.000	0.286	0.219	0.535	0.000
44	0.000	0.500	-0.217	0.535	0.002
45	0.000	0.336	-0.444	0.190	0.001
46	0.000	0.175	-0.010	0.967	0.001
47	0.000	0.462	0.052	0.863	0.000
48	0.023	0.312	-6.681	0.805	0.000
49	0.000	0.359	-0.516	0.095	0.001
50	0.000	0.186	-0.203	0.455	0.000
51	0.000	0.138	0.312	0.339	0.000
52	0.000	0.856	-0.788	0.030	0.004
53	0.000	0.541	-0.755	0.058	0.001
54	0.000	0.882	-0.348	0.298	0.007
55	0.000	0.930	-0.545	0.033	0.002
56	0.000	0.603	-0.292	0.433	0.000
57	0.000	0.597	-0.619	0.064	0.009
58	0.000	0.233	-0.271	0.506	0.001

59	-0.001	0.003	-0.056	0.835	0.000
60	0.000	0.895	-0.195	0.576	0.000
61	0.014	0.566	36.544	0.190	0.020
62	0.000	0.542	-0.985	0.006	0.004

Source: Compile from daily return of the sample mutual fund schemes taken from SEBI and benchmark return taken from their respective website.
(Note- P value at 5 per cent level of significance.)

Table 5.28 presents the summary of stock selectivity and market timing results of Treynor and Mazuy model. It can be observed from the table that the alpha value (α) of 15 mutual fund schemes were statistically significant out of which 12 (19.36 per cent of the total sample) schemes have the positive α value. These twelve schemes witnessed the successful stock selection ability of the asset management companies in terms of Treynor & Mazuy formulation. It was found that rests of the 47 schemes (75.8 per cent) were insignificant which have the positive α value.

The table showed that out of 62 mutual fund schemes asset managers of only 2 schemes (3.22 per cent) appears to be successful market timers. The observed value for their gamma coefficient is found to be positive and significant in terms of p value at five per cent level of significance. There are other ten sample schemes for which p value are significant but are negative. Rest of the fifty sample mutual schemes (80.64 per cent) depicts the insignificant value in which fourteen schemes have positive and thirty six have the negative gamma coefficient value.

Table - 5.29 Testing of Hypothesis (Treynor & Mazuy Model)

Treynor and Mazuy	Significant		Insignificant		Total
	Positive	Negative	Positive	Negative	
Sponsored Institution					
Bank Sponsored	0	1	1	5	7
Institutional	0	0	1	3	4
Private	2	9	12	28	51
Total	**2**	10	14	36	**62**
Investment Objective					
Growth	0	6	9	21	36
Hybrid	0	4	3	7	14
Income	2	0	2	8	12
Total	**2**	10	14	36	**62**

Source: Researcher Compilation

The value of gamma is the measure of market timing abilities of the asset management companies. The table 5.29 reveals the result of the hypothesis of Trynor & Mazuy Model in terms of sponsored institution and investment objectives. It can be observed from the table that only 2 sample mutual fund schemes (Birla Sun Life Income Plus and HDFC High Interest Fund- Dynamic Plan) are significant at five per cent level of significance and show a positive gamma value. Rest of the 60 schemes is either statistically insignificant or statistically significant but having negative gamma value. In case of sponsored institution, only private companies show market timing abilities. The bank sponsored sample managed schemes have only one scheme which is to be found significant with negative gamma value and none of the scheme of institution asset management companies is found to be significant. In terms of investment objective, superior market timing abilities is reflected by 2 sample managed schemes belong to income schemes. From these results it can be interpreted that 2 (3.22 per cent) of the sample mutual fund schemes are reflect the significant positive market timing abilities.

Henriksson & Merton Market Timing Model

Henriksson & Merton (1981) proposed a similar but simple model to test the market timing abilities of the fund manager. Treynor & Mazuy (1966) argued in the model that the fund manager who times the market, is continuously changing the beta of his portfolio depending upon the magnitude of the (Rm – Rf) term. However, Heniksson & merton in their model took a more qualitative approach to market timing. They assumed that the market timers are required to forecast whether Rm $\geq$ Rf, (up markets) or Rm $\leq$ Rf (down markets) and select a fund beta accordingly (a large value if the market is expected to do well, i.e. Rm $\geq$ Rf and a small value otherwise, i.e. when Rm $\leq$ Rf. The model is:

$$R_p - R_f = \alpha + \beta\,(R_m - R_f) + \gamma\,[D(R_m - R_f)] + \varepsilon_{pt}$$

where D is a dummy variable that equals to 0 in up markets, i.e. Rm $\geq$ Rf and -1 otherwise, i.e. when Rm $\leq$ Rf. The other symbols are as defined in equation as

R_p= denotes the average return of the mutual fund scheme,

R_m= denotes the average return of market or benchmark index,

R_f= denotes the average return on risk-free assets,

α, β and γ are the parameter of the model.

ε_{pt} = denotes to the error term.

Table - 5.30 Result of Henriksson and Merton Model of Sample Mutual Fund Schemes

Scheme No.	Stock Selection Coefficient		Market Timing Coefficient		R^2
	α	p (α)	γ	p (γ)	
1	0.0000	0.7610	0.0010	0.4000	0.0020
2	0.0000	0.4290	0.0000	0.6650	0.0110
3	0.0000	0.6050	0.0010	0.1760	0.0010
4	0.0000	0.3360	0.0010	0.1350	0.0080
5	0.0000	0.0000	0.0000	0.9930	0.0000
6	0.0000	0.0110	0.0000	0.0940	0.0010
7	0.0000	0.0000	0.0000	0.1250	0.0010
8	0.0000	0.7640	0.0000	0.6250	0.0010
9	0.0000	0.7290	0.0000	0.7680	0.0000
10	0.0000	0.0000	0.0000	0.2220	0.0050
11	-0.0010	0.1570	-0.0020	0.1420	0.0290
12	0.0000	0.0050	0.0000	0.0710	0.0010
13	0.0000	0.0050	0.0000	0.0750	0.0010
14	0.0000	0.4290	0.0000	0.7560	0.0010
15	0.0000	0.0000	0.0000	0.2090	0.0000
16	-0.0010	0.4120	-0.0010	0.4180	0.0000
17	0.0000	0.6550	0.0000	0.6990	0.0080
18	0.0000	0.8300	0.0000	0.8820	0.0070
19	0.0000	0.7100	0.0000	0.7560	0.0080
20	-0.0010	0.1360	-0.0010	0.1960	0.0240
21	0.0000	0.4050	0.0000	0.6480	0.0150
22	0.0000	0.2500	0.0001	0.7970	0.0030
23	0.0000	0.7940	-0.0001	0.8980	0.0020
24	0.0000	0.0000	0.0000	0.9590	0.0000
25	0.0000	0.3860	0.0000	0.0450*	0.0010
26	0.0000	0.3750	0.0010	0.2600	0.0020
27	0.0000	0.4650	0.0000	0.5820	0.0100
28	0.0000	0.2600	0.0000	0.4550	0.0010
29	0.0000	0.9480	0.0000	0.9380	0.0000
30	-0.0010	0.1770	-0.0010	0.2390	0.0030
31	0.0010	0.9700	-0.0410	0.4930	0.0000
32	0.0010	0.2540	0.0010	0.1180	0.0020
33	-0.0010	0.1500	-0.0010	0.3480	0.0020
34	0.0000	0.0000	0.0001	0.4820	0.0010
35	-0.0010	0.0880	0.0000	0.4870	0.0000
36	-0.0010	0.0910	-0.0010	0.1980	0.0010
37	0.0000	0.2600	-0.0010	0.3220	0.0050

38	0.0000	0.3250	0.0000	0.4890	0.0000
39	0.0000	0.0050	0.0000	0.0000*	0.0050
40	0.0000	0.0000	0.0000	0.0290*	0.0020
41	-0.0010	0.0110	0.0000	0.9860	0.0010
42	0.0000	0.0040	0.0000	0.9020	0.0000
43	0.0000	0.5790	0.0000	0.9980	0.0000
44	-0.0010	0.2590	-0.0010	0.4620	0.0030
45	-0.0010	0.0090	-0.0020	0.0270	0.0020
46	-0.0010	0.1160	0.0000	0.3720	0.0010
47	0.0000	0.9940	0.0000	0.5970	0.0000
48	-0.0010	0.9700	-0.0480	0.4200	0.0000
49	0.0000	0.4510	0.0000	0.5290	0.0000
50	0.0000	0.2340	0.0000	0.7820	0.0000
51	0.0000	0.3400	0.0000	0.8110	0.0000
52	0.0000	0.3400	0.0000	0.5980	0.0020
53	-0.0010	0.1050	-0.0010	0.2810	0.0000
54	0.0000	0.3320	-0.0010	0.3960	0.0070
55	0.0000	0.6080	0.0000	0.9440	0.0010
56	0.0000	0.6080	0.0000	0.9440	0.0010
57	0.0000	0.5390	-0.0010	0.4560	0.0080
58	-0.0010	0.0920	-0.0010	0.3120	0.0010
59	0.0000	0.1950	0.0000	0.4400	0.0000
60	0.0000	0.6130	0.0010	0.3780	0.0010
61	-0.0070	0.8620	-0.0630	0.3330	0.0020
62	0.0000	0.7310	0.0000	0.7910	0.0020

Source: Compile from daily return of the sample mutual fund schemes taken from SEBI and benchmark return taken from their respective website.
(Note- P value at 5 per cent level of significance. indicate the positive and significant value of γ.)*

Table 5.30 shows the result of Henriksion & Merton model. According to table, the number of funds with positive selectivity coefficient was 47 in all the sample mutual fund schemes, of which only fourteen schemes were statistically significant. On the other hand there are 15 negative coefficients, out of which two are found to be statistically significant. In terms of market timing, it is found that only three schemes showed the market timing skills which have positive significant value. The P value for gamma was found to be statistically significant and positive at 5 per cent level of significance. Other schemes exhibited wrong market timing abilities of asset management companies. Majority of sample schemes (93.55 per cent) were found to be insignificant while only 4

schemes (6.45 per cent) showed the successful market timing abilities in terms of Henriksion and Merton Model.

Table - 5.31 Testing of Hypothesis (Henriksson & Merton Model)

Henriksson and Merton	Significant		Insignificant		Total
	Positive	Negative	Positive	Negative	
Sponsored Institution					
Bank Sponsored	0	0	6	1	7
Institution	0	1	2	1	4
Private	3	0	34	14	51
Total	**3**	1	42	16	**62**
Investment Objective					
Growth	0	1	20	15	36
Hybrid	1	0	13	0	14
Income	2	0	9	1	12
Total	**3**	1	42	16	**62**

Source: Researcher Compilation

Table 5.31 reveals the result of the hypothesis of Henriksson and Merton Model in terms of sponsored institution and investment objectives. It can be observed from the table that only 3 sample mutual fund schemes (HDFC Prudence Fund, Kotak Bond Deposit, L& T Triple Ace) are significant at five per cent level of significance and show the positive gamma value. Rest of the 59 schemes is either statistically insignificant or statistically significant but having negative gamma value. In terms of sponsored institution, only private companies show market timing abilities. The institutional sample managed schemes have only one scheme which is found to be significant with negative gamma value and none of the scheme of bank sponsored asset management companies is found to be significant. In terms of investment objective, superior market timing abilities is reflected by 3 sample managed schemes where 2 belong to income schemes and one belong to hybrid scheme. From these results it can be interpreted that only 3 (4.83 per cent) of the sample mutual fund schemes are reflect the significant positive market timing abilities. The empirical results do not lend support to the hypothesis that Indian asset Management companies are able to time the market.

So in terms of market timing models, majority of the Indian Asset Management Companies do not seem to be engaged in market timing activities and Indian fund managers market the time in the wrong direction. The result indicates that most of the

Indian asset management companies focused only on stock selection rather than market timings. With respect to market timing abilities of the Indian asset management companies, the majority of asset managers followed preserve market timing. The result shows that the fund managers are not successful in reaping market premium and failed to forecast the broad market trends accurately. The outcome of the study is in conformity with the findings of *Tripathy N. P. (2005)* and *Zabiulla. (2013)* indicating the inability of fund managers in market timing.

5.4 ASSET MANAGEMENT COMPANIES- AN EMPIRICAL ANALYSIS

This section deals with performance and growth of the asset management industry as a whole. It starts with identifying the determinants affecting the industry and analyzes the impact of these factors on the growth of asset management companies. It also examines comparison of public and private asset management companies, evaluate performance of asset management companies during financial crisis and competitiveness of the industry through concentration analysis

DETERMINANTS AND THEIR IMPACT ON ASSET MANAGEMENT COMPANIES

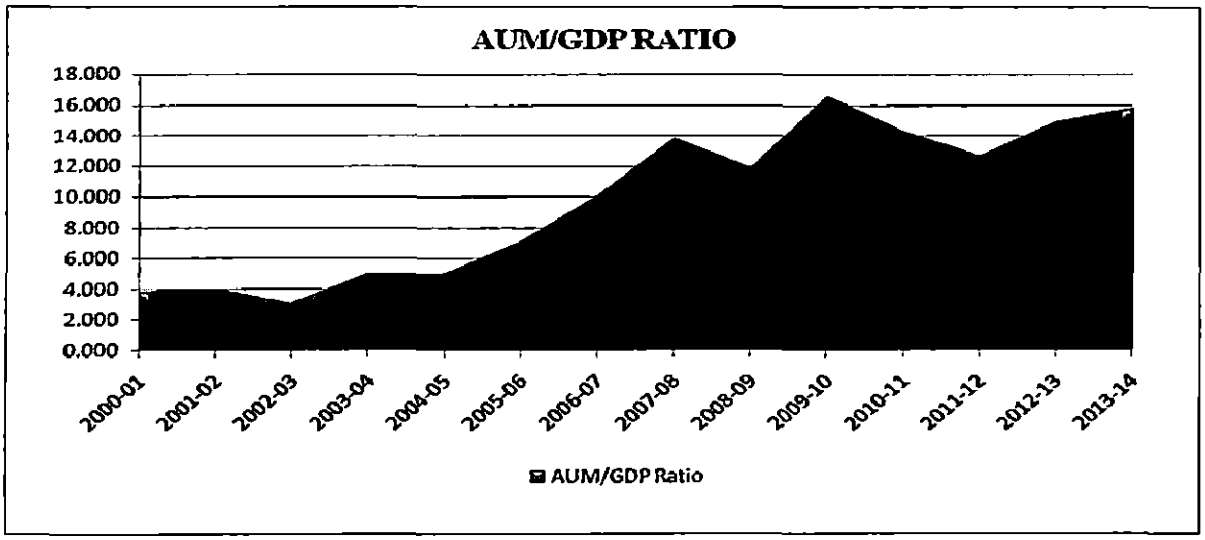
After going through earlier literature of the study, the various determinants are identified that affect the growth of the asset management industry. These factors are Penetration ratio, Scheme size, Turnover, and Stock Market fluctuations (NSE).

Penetration Ratio

The Indian asset management industry is the fastest growing and most competitive segments of the financial sector. The penetration is one of the important factor that determine the growth of the asset management industry. It is an important component of the industry which shows the relationship between Asset under Management with gross domestic product of the economy. The penetration of the industry is computed as ratio (in per cent) of AUM to GDP which is expressed in appendix VIII.

Asset Penetration Ratio shows a mix trend in the study period. The ratio was 3.54 per cent in 2000-01 and touches the maximum rate of 16.55 per cent in 2009-10. At the end of 2013-14, the rate was15.76 per cent and the mean value of the penetration ratio is 9.54 per net during the study period.

Graph - 5.1 Trends of Penetration of Asset Management Industry in India



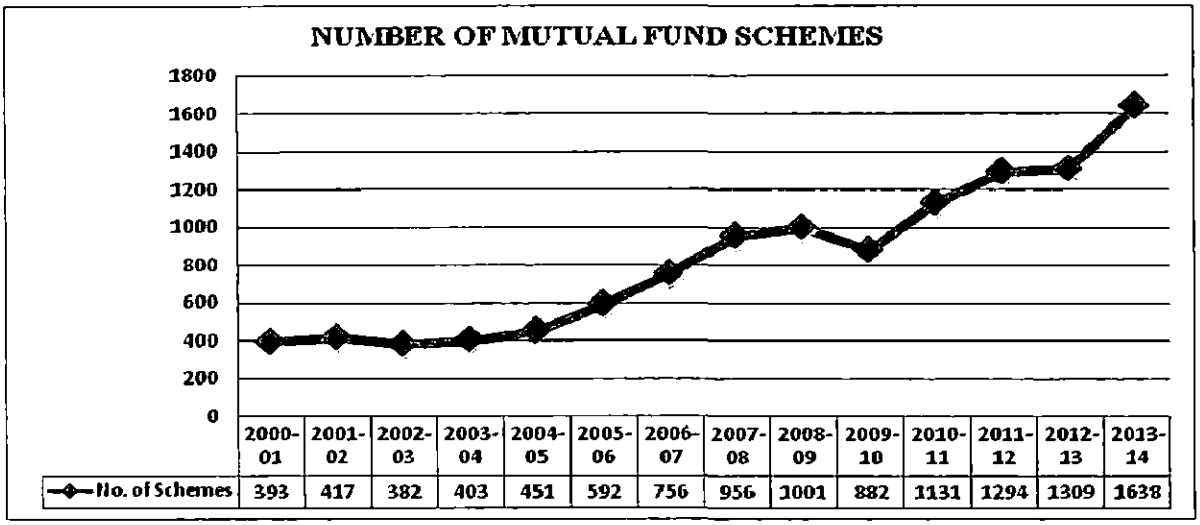
Source: Various reports of AMFI and Planning Commission.

It can be observed from the graph 5.1 that AUM to GDP ratio recorded subsequent increasing trend in the study period. The penetration of the industry was 3.857 per cent in the 2000-01 and recorded the double digit growth in 2006-07. It was highest in 2009-10 i.e. 16.553 per cent and registered the lowest figure of 3.091 per cent in 2002-03. At the end of 2013-14, asset penetration ratio was 15.76 per cent.

Schemes Size

The numbers of mutual fund schemes are increasing over the period of time signifies the shift of investment corpus in the hand of asset management industry. These schemes cover important sector of the economy and invest the fund according to objective of investment. The numbers of schemes are also important factor that effect the growth of the asset management industry.

Graph - 5.2 Number of Mutual Fund Schemes from 2000-01 to 2013-14



	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
No. of Schemes	393	417	382	403	451	592	756	956	1001	882	1131	1294	1309	1638

Source: Various AMFI Reports.

In the year of 2000-01 there were 393 schemes managed by asset management companies which rose to 1638 at the end of 2013-14 with a corpus of Rs. 905120 crore of funds. Out of total 1638 schemes 1077 schemes are the income schemes, 311 are the equity schemes and rest belong to other classifications. In the year 2013-14, 329 new schemes are launched to channelize the savings of investors into the mutual funds.

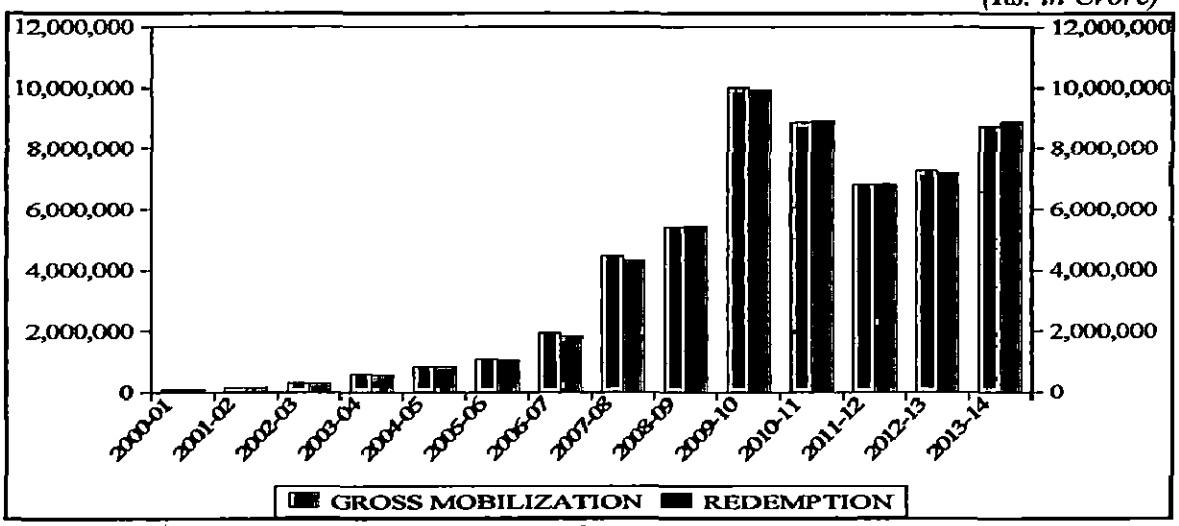
Turnover Ratio

The turnover ratio is a measure of activeness of the fund manager. It measure how many times the investment portfolio of the mutual fund is turned over annually and how often Asset Management Company's trade. The turnover ratio is calculated as the maximum of purchased securities or disposed securities divided by the asset under management for the period *(Karlsson T. 2005, p.22).*

Turnover Ratio = Gross Mobilization (Gross Mobilization > Redemption) or Redemption (Redemption > Gross Mobilization) / Asset Under Management.

Graph - 5.3 Trends of Gross Mobilization and Redemption of Mutual Fund Schemes

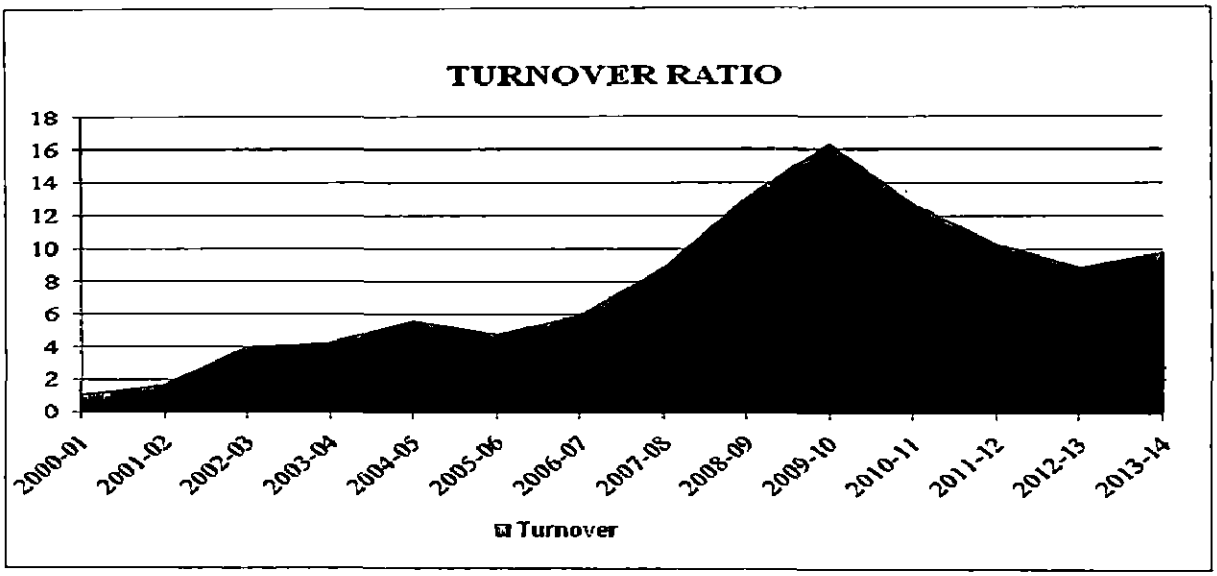
(Rs. in Crore)



Source: Compiled from various SEBI Annual reports

It can be observed from the graph 5.3 that Gross mobilization had been increasing from 2000-01 and reached to Rs. 10019022 crore in 2009-10. In next two years, declining trend is recorded and later in 2012-13 it starts recovering. The gross mobilization was Rs. 8715253 crore at the end of 2013-14. A close investigation of redemption of the mutual fund schemes showed that it was less than gross mobilization in majority of the years. It reflects that investors have trust on the asset management companies and invest their saving in the mutual funds. The redemption amount was maximum in 2009-10 and minimum in 2000-01.

Graph - 5.4 Turnover Ratio of Asset Management Industry from 2000-01 to 2013-14



It can be observed from the Graph 5.4 that trend of turnover shows increasing trend during the study period. Turnover ratio is also one of the important factors to determine the growth of the asset management industry. The year 2009-10 registered highest turnover ratio of 16.32. After 2009-10, turnover ratio showed a declining trend for the next three years, thereafter started showing an upward trends touching to 9.81 in 2013-14.

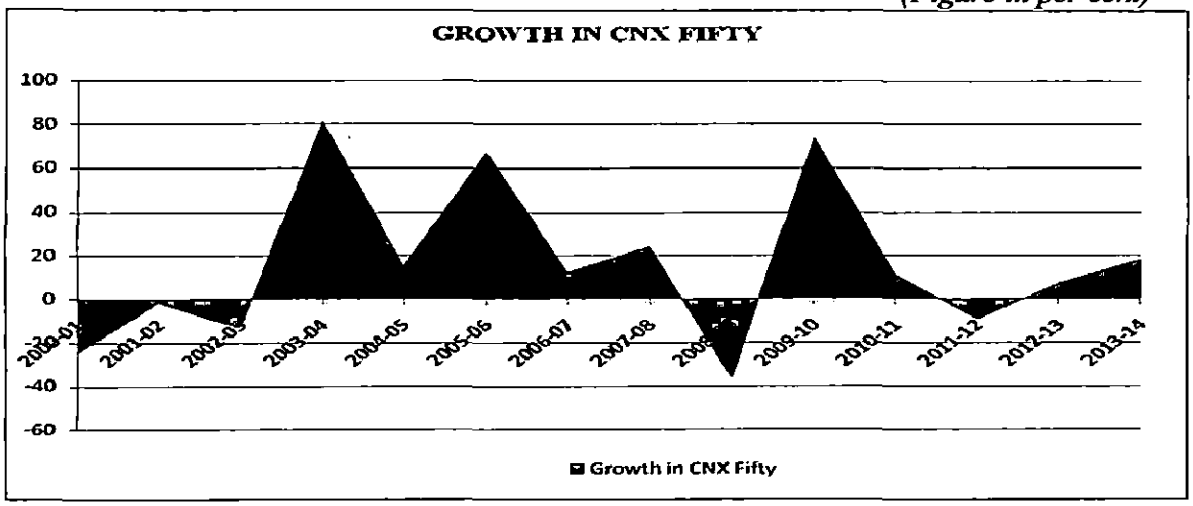
Stock Market Index (CNX Nifty)

Financial indexes are constructed to measure price movements of stocks, bonds, T-bills and other forms of investments. Stock market indexes are meant to capture the overall behavior of equity markets. A stock market index is created by selecting a group of stocks that are representative of the whole market or a specified sector or segment of the market. An Index is calculated with reference to a base period and a base index value. The CNX Nifty, also called the Nifty 50, is National Stock Exchange of India's benchmark index for Indian equity market. NSE was incorporated in 1992 and was given recognition as a stock exchange in April 1993. It started operations in June 1994 with the launch of the Wholesale Debt Market Segment. Subsequently, the Capital Market Segment was launched in November 1994 as a trading platform for equities and for Derivative Segment in June 2000 *(NSE. n.d., p.1).*CNX Nifty is owned and managed by India Index Services and Products Ltd. (IISL). IISL is India's first specialized company focusing upon the index as a core product. The CNX Nifty is a well diversified 50 stock

index comprising for 23 sectors of the economy. It is used for a variety of purposes such as benchmarking fund portfolios, index based derivatives and index funds.

Graph - 5.5 Trends of Growth in CNX Nifty from 2000-01 to 2013-14

(Figure in per cent)



Source: NSE Historical Index data

The graph 5.5 depicts the growth of the in NSE indices during the study period. Market index has an important factor that influences the asset management industry. It can be observed from the graph that the index showing increasing and decreasing trend during the study period. Sharpe decline was registered in 2000-01 when the index was down by more than 24 per cent followed by 1.62 and 13.4 per cent in the next two years. In the later period index experienced an increasing trend during the study period except 2008-09 and 2012-13 and showed a growth rate of 17.98 per cent in 2013-14.

Null Hypothesis-3:

There is no significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of asset management companies in India.

Alternate Hypothesis-3

There is a significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of asset management companies in India.

To test the hypothesis, growth in Asset Under Management (AUM) is taken to measure the performance of asset management companies, as a dependent variable for the study period 2000-01 to 2013-14. The major determinants that impact the performance of asset management companies are taken as independent variables i.e. Penetration ratio, Scheme

Size, Turnover Ratio and Stock market fluctuations (growth in NSE). The Multiple regression technique is used to test the hypothesis and the result can be analyzed as:

Table - 5.32 Model Summary of Multiple Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.939[a]	.881	.829	12.77703

Predictors: (Constant), Penetration, Scheme Size, Turnover and NSE.

Model summary depicts the relationship between the dependent variable (AUM) and independent variable (APR, SCH SIZE, TURNOVER, NSE). The R value (.976) represents the multiple correlations between the dependent variable and independent variable which is found to be very high (.939) and positive correlation. The R square (.881) is also called as coefficient of multiple determination showed 88.1 per cent variations in the dependent variable (AUM) is explained by independent variable (APR,SCH SIZE, TURNOVER, NSE). The rest of the 11.9 per cent changes are caused by variable other than independent variables also called coefficient of non- determination (1- R^2). The regression equation appears to be very useful for making predictions for growth of asset management companies since the value of R^2 are close to 1.

Table - 5.33 ANOVA Analysis of Model

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10906.293	4	2726.573	16.702	.000a
	Residual	1469.273	9	163.253		
	Total	12375.566	13			

a. Predictors: (Constant), Penetration, Scheme Size, Turnover and NSE
b. Dependent Variable: AUM

The regression sum of squares shows the variability accounted for by the regression model, which is the fitting of the least-squares line. The residual sum of squares shoes the variability unaccounted for by the regression model. Degree of freedom in Regression is equal to the number of predictors in the model denoted by k, as the model has 4 predictors. Degree of Freedom Residual is equal to N-K-1, where N is the total number of cases used in the regression, and K is the number of predictors. Degree of Freedom Total is equal to N-1 i.e.13. At the $\alpha = 0.05$ level of significance, there exists enough evidence to conclude that the predictors are useful for predicting performance of asset management companies (AUM) therefore the model us useful.

Table - 5.34 Multiple Regression Analysis

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.445	8.350		.772	.460
	Penetration	6.828	2.843	1.100	2.402	.040
	Scheme Size	-.038	.024	-.510	-1.598	.144
	Turnover	-4.306	1.795	-.631	-2.399	.040
	NSE	.667	.117	.772	5.679	.000

Dependent Variable: Growth in AUM

Table 5.34 examined the inferential statistics and hypothesis testing through multiple regression technique. It determines the regression coefficient i.e. intercept and slope. The intercept value (6.445) can be interpreted as the value of dependent variable value when independent value is zero. It is also called as constant value denote by alpha (α). The slope coefficients show the value 6.828 for Penetration, -0.038 for Scheme size, -4.306 for Turnover and 0.667 for NSE. It shows the rate of change in dependent variable in respect of independent variable. The regression equation can be estimated as-

Growth in AUM = 6.445 + 6.828 Penetration + 0.667 NSE – 4.306 Turnover

Asset Penetration Ratio

The result shows the coefficient value as 6.828 for APR. It indicates that single unit change in APR increases AUM by 6.828 units. The p value in the table is 0.04 which is less than critical p value at five per cent level of significance. Hence APR is statistical significant predictor of growth of Asset under management (AUM) of the asset management companies in India.

Schemes Size

The result shows the coefficient value is -0.038 for FUND SIZE. It indicates that single unit change in Scheme Size decreases AUM by 0.038 units. The p value in the table is 0.144 which is more than critical p value at five per cent level of significance. Hence Scheme Size is statistical insignificant predictor of growth of Asset under management (AUM) of the asset management companies in India and not included in the regression equation.

Turnover Ratio

The result shows the coefficient value is -4.306 for TURNOVER. It indicates that single unit change in TURNOVER decreases AUM by 4.306 units. The p value in the table is 0.040 which is less than critical p value at five per cent level of significance. It can be concluded from the results that TURNOVER is statistical significant predictor of growth of Asset under management (AUM) of the asset management companies in India.

Stock Market Fluctuations (NSE)

The result shows the coefficient value is 0.667 for NSE. It indicates that single unit change in NSE increases AUM by 0.667 units. The p value in the table is 0.00 which is less than critical p value at five per cent level of significance shows NSE is the statistical insignificant predictor of Asset under management (AUM) of the asset management companies in India.

COMPARATIVE ANALYSIS OF PUBLIC AND PRIVATE ASSET MANAGEMENT COMPANIES

In early 1990s, Government allowed public sector banks and institutions to set up asset management companies in the form of mutual funds. Thereafter, asset management companies sponsored by private sector entities were allowed to enter the capital market *(SEBI. n.d.)*. In this section a comparison is made between public and private asset management industry. The public sector consists of bank sponsored and institutions asset management companies whereas private sector consists of private asset management companies. The industry experienced public sector dominance in the starting of the study period where 71.60 per cent share was contributed by public sector companies. The private asset management companies were accounted for 28.40 per cent share in the industry. At the end of study period the scenario was completely change when 80.57 per cent share was in the hand of private companies and only 19.43 per cent share was jointly contributed by Bank sponsored and institution companies.

Table - 5.35 Total Asset under Management of Sponsored Institution during 2000-01 to 2013-14

(Rs. in crore)

Year	Public Sector				Private sector		Total
	Bank Sponsored	Share in (%)	Institutions	Share in (%)	Private	Share in (%)	
2000-01	61350 (-27.3)	67.72	3507 (-1.76)	3.87	25730 (2.73)	28.40	90587
2001-02	55404 (-9.69)	55.08	4234 (20.73)	4.21	40956 (59.18)	40.71	100594
2002-03	18007 (-67.5)	22.66	5935 (40.17)	7.47	55522 (35.56)	69.87	79464
2003-04	28085 (55.03)	20.12	6539 (10.18)	4.68	104992 (89.10)	75.20	139616
2004-05	29103 (3.62)	19.45	3010 (-53.97)	2.01	117487 (11.90)	78.53	149600
2005-06	45119 (55.03)	19.46	5229 (73.72)	2.26	181514 (54.50)	78.29	231862
2006-07	54570 (20.95)	16.72	9643 (84.41)	2.95	262175 (44.44)	80.33	326388
2007-08	77147 (41.37)	15.27	12384 (28.42)	2.45	415621 (58.53)	82.28	505152
2008-09	64559 (-16.32)	15.47	17825 (43.94)	4.27	334916 (-19.42)	80.26	417300
2009-10	112535 (74.31)	18.33	25105 (40.84)	4.09	476339 (42.23)	77.58	613979
2010-11	122798 (9.12)	17.53	11195 (-55.41)	1.60	566545 (18.94)	80.87	700538
2011-12	119677 (-2.54)	18.00	5799 (-48.20)	0.87	539316 (-4.81)	81.13	664792
2012-13	150980 (26.16)	18.49	7185 (23.90)	0.88	658492 (22.10)	80.63	816657
2013-14	165104 (9.35)	18.24	10752 (49.65)	1.19	729264 (10.75)	80.57	905120
Average	79255.13	**24.47**	8794.13	**3.06**	302261.00	**72.48**	390310.27
St. dev	45471.95	15.95	6081.78	1.84	246578.64	16.54	290270.93
Maximum	165104	67.72	25105	7.47	729264	82.28	905120
Minimum	18007	15.27	3010	0.87	25046	28.40	79464
CAGR	7.32		8.33		26.98		17.86

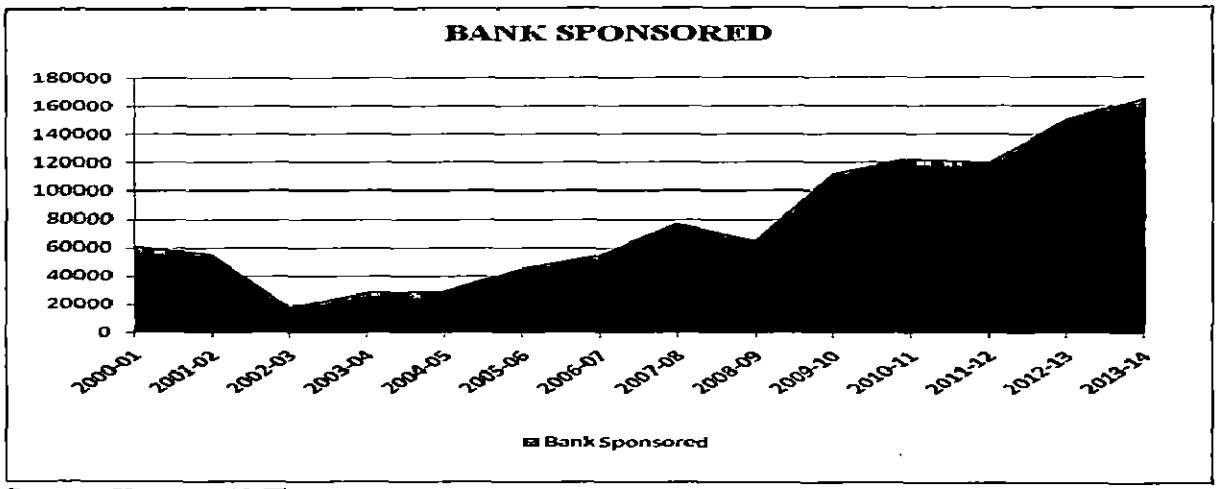
Source: Various AMFI Reports.

(Note- Figure in bracket represents the annual growth rate in per cent.)

Table 5.35 shows the asset under management in different category of sponsorship of asset management companies i.e. bank sponsored, institution and private asset management companies during the study period 2000-01 to 2013-14. The total asset under management of the industry was Rs. 90587 crore in 2000-01 and Rs. 905120 crore at the end of 2013-14. The average asset under management of the industry was Rs.

390310 crore during the 14 years study period with a maximum of Rs. 905120 crore in 2013-14 and minimum of Rs. 79464 crore in 2002-03. It can be observed from the table that asset management industry is growing at 17.86 per cent annually on CAGR basis.

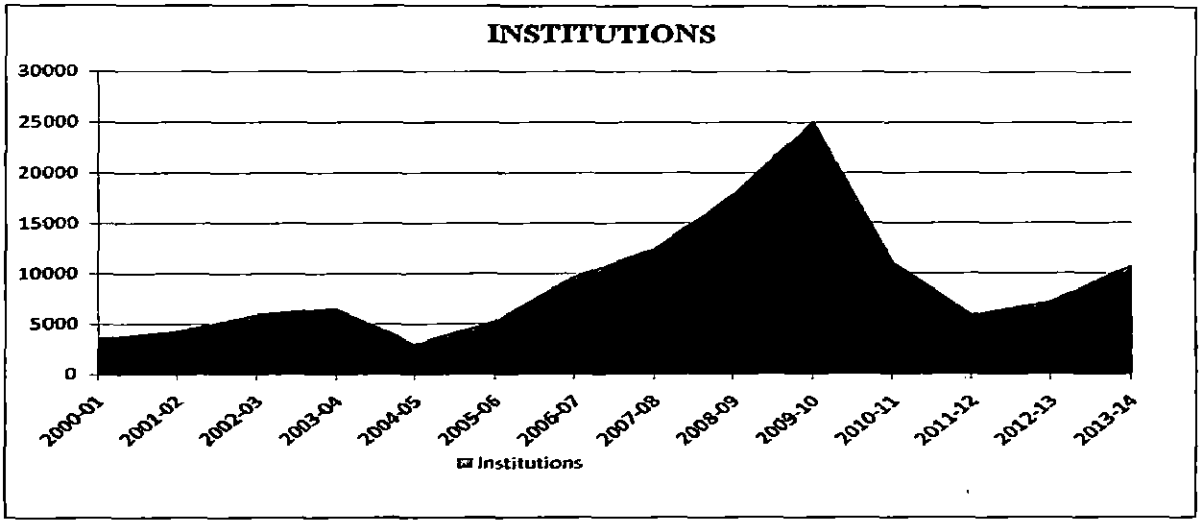
Graph - 5.6 Trends of AUM of Bank Sponsored Asset Management Companies



Source: Various AMFI Reports.

The Bank Sponsored asset management companies consist of Rs.165104 crore of assets under management at the end of 2013-14 which contribute 18.24 per cent share of the total asset under management. It can be seen from the table that at the starting of study period, Bank sponsored companies consist of 67.72 per cent of the total AUM but it witnessed heavy decline in next 2 years. Its share drop to 22.66 per cent at the end of 2002-03. In the last five years of the study the market share of the bank sponsored asset management companies is quite stable. The CAGR of these companies during the study period is 7.32 per cent per annum. The AUM was highest in 2013-14 and lowest in 2002-03.

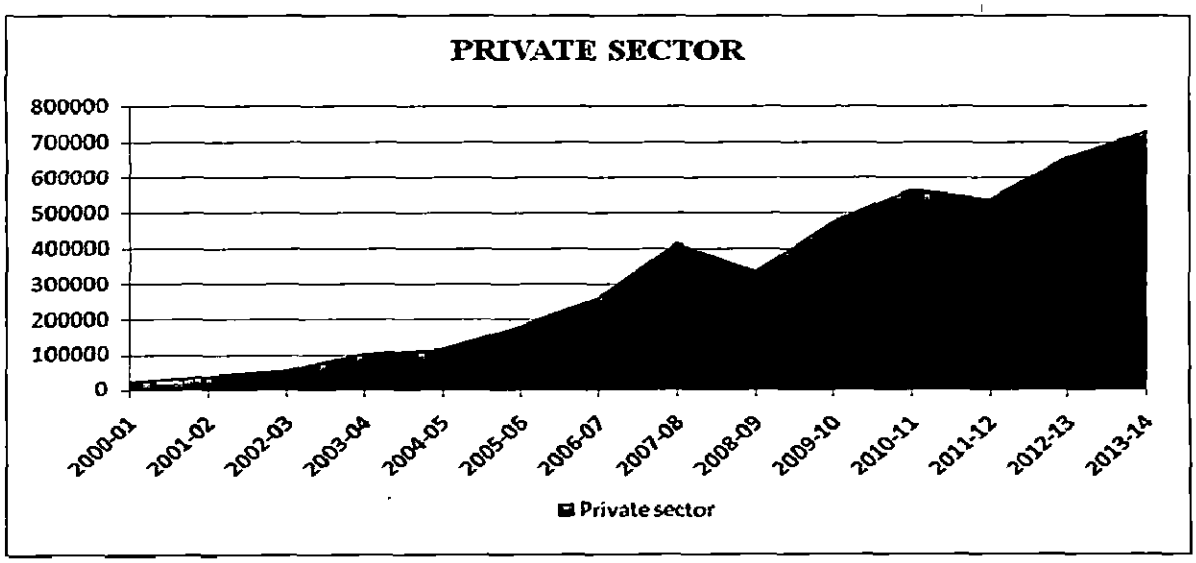
Graph - 5.7 Trends of AUM of Institution Asset Management Companies



Source: AMFI Reports.

The Institution asset management companies manage Rs.10752 crore of assets under management at the end of 2013-14 which contribute 1.19 per cent share of the total asset under management. The average market share of this classification was 3.06 per cent during the study period which is lowest as compare to others. The CAGR of the Institution asset management companies during the study period is 8.33 per cent per annum. The AUM was highest in 2009-10 and lowest in 2004-05.

Graph - 5.8 Trends of AUM of Private Asset Management Companies



Source: AMFI Reports.

The role of the private sector had increased over the period of time and at the end of the study period the majority of the share of AUM industry was held by private sector

companies. At the beginning of the study period, the private sector companies managed 28.4 per cent assets but at the end of the study period it showed drastic change and the share rose to consist of 81.13 per cent of the assets. Investor preference was shifted from bank sponsored asset management companies to private sector companies. The corpus of private sector companies was Rs.729264 crore of all assets under management at the end of 2013-14. The CAGR of the private sector asset management companies during the study period is 26.98 per cent per annum which was highest as compared to other categories. The AUM was highest in 2013-14 and lowest in 2000-01.

Null Hypothesis-4:

There is no significant difference in the AUM of public sector and private sector asset management companies in India.

Alternate Hypothesis-4:

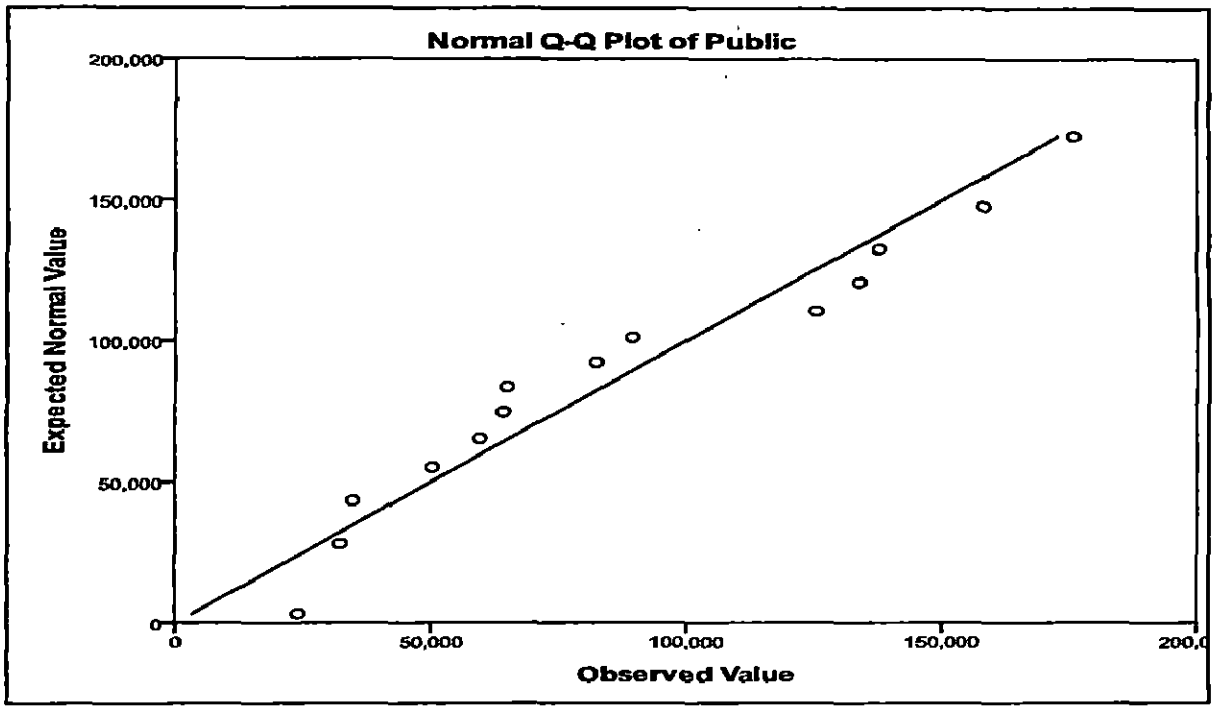
The AUM of Private sector Asset Management Companies is significantly improved as compare to public sector in India.

Table - 5.36 Tests of Normality

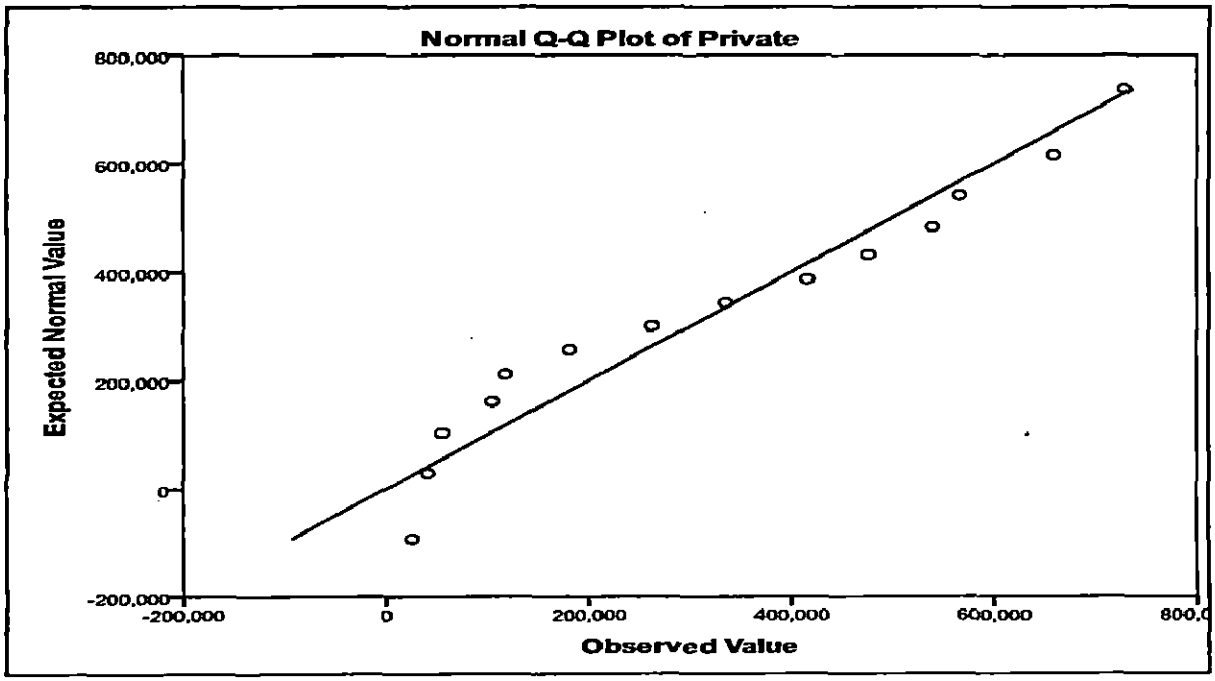
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Public	.180	14	.200*	.927	14	.281
Private	.157	14	.200*	.921	14	.228

Table 5.36 presents the test of normality of the sample taken for testing of hypothesis. If the number of observation is between 3 to 2000, Shapriro- Wilk test is taken into consideration otherwise Kolmogorov-Smirnov is applied to test the normality. It can be observed from the table that significance p values are .281 and .228, more than critical p value at 5 per cent level of significance in both cases hence it can be concluded that data set is normal.

Graph - 5.9 Normality Q-Q Plot of AUM of Public Asset Management Companies



Graph - 5.10 Normality Q-Q Plot of AUM of Private Asset Management Companies



Similarly, the quantile-quantile plot (Q-Q plot) compares ordered values of a variable with quantiles of a specific theoretical distribution. Q-Q plots are used to see how well empirical data is normally distributed. The curve pattern in the Q-Q-plots also suggests

that the data of the AUM in public and private sector asset management companies is normal.

Table - 5.37 Group Statistics

	Companies	N	Mean	Std. Deviation	Std. Error Mean
AUM	Public	14	88055.71	49659.50	13272.05
	Private	14	322062.07	243196.19	64996.91

Table 5.37 shows the group statistics of the sample. It is worthwhile to mention here that Public Sector Asset Management Companies include the Bank Sponsored Asset Management Companies and Institution Asset Management Companies. The period of the test is fourteen year. The mean AUM in Public Sector Asset Management Companies is 88055.71 Crore and the mean of the AUM in private Sector Asset Management Companies is 322062.07 Crore in the study period. The higher mean growth rate of Private sector companies shows the better performance as compared to public sector companies.

Table - 5.38 Independent Samples t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
AUM	Equal variances assumed	31.50	.000	-3.52	26	.002	-234006.3	66338.1	-370366.3	-97646.3
	Equal variances not assumed			-3.52	14.0	.003	-234006.3	66338.1	-376209.6	-91803.1

The result of Independent sample t test (one tail) is exhibited in the table 5.38. The significance p value of Levene's test signifies the assumption of equal variance for t test. If the p value is greater than 0.05, the result for equal variance is taken into consideration, if the p value is less than 0.05, result of equal variance is not assumed, is taken into consideration. In this table, on the basis of Levene's test, equal variance not assumed as the p value is 0.000 which is lower than the critical value 0.05. The difference mean in

AUM (-234006.3) is placed between the lower and upper limit of confidence interval of the difference at 95 per cent. If the test is applied 100 times, 95 times the mean difference value would lie in the 95 per cent confidence interval. The significance p value is 0.003 (two tails) which is lower than the value 0.05, shows the rejection of null hypothesis and acceptance of alternate hypothesis. The result indicates that there is a difference between AUM of Public Sector and Private sector asset management companies but to know which sector is performing better, this hypothesis is tested on one tail basis. The p value (two tails) is divided by two to get the value of one tails. Again it rejects the null hypothesis and accepts the alternate hypothesis. Hence there is a strong evidence (t= -1.71, p= .0015) from the result that AUM of Private sector Asset Management Companies is significantly improved as compare to public sector in India during the study period.

FINANCIAL CRISIS AND ASSET MANAGEMENT COMPANIES

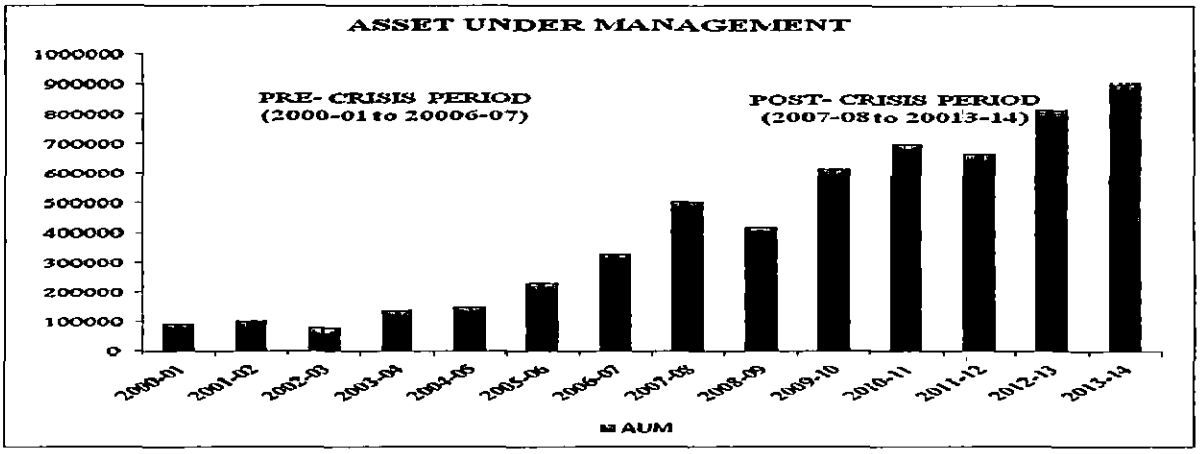
The events of 2008 have already passed into history, but they still have the power to take our breath away. The ugly signs of financial crisis first manifested in 2007 when the London based HSBC sacked the chief executive of its North America mortgage lending business after it reported losses of $105.4 billion. Within fortnight DR Horton, the largest real estate company in the US warned of huge subprime related losses. By July end when Bear sterns, one of the biggest players in the subprime market, talked about trouble in two of its hedge funds. The global financial crisis came to its forefront in business world after the second quarter of 2008, with the failure of number of American financial companies. The commerce department reported the GDP growth rate was mere 2.8 per cent, showing indication of recession. Some of the well established Wall Street investment banks were became victim of financial crisis. Fannie Mae and Freddie Mac have been nationalised to ensure the financial stability in 2008. Firm Lehman Brothers had file bankruptcy after being denied support by the Federal Reserve. On 15th September 2008 Merrill lynch acquired by the bank of America. Another giant AIG (American Insurance Group) the world's top insurer, which suffered due to its credit rating being reduced, was helped by Federal Reserve which created $85 billion credit facility to stop its collapse. Golden Sachs and Morgan Stanley converted into commercial bank so that they have more market liquidity. Stock market values fell dramatically in

reaction to the failure of financial institution in the US *(Ashraf S. H. & Sharma D. 2011, p. 50).*

The intensification of the financial crisis in the international financial markets of advanced economies that started around mid-2007 has hit much harder than expected.GFC is not confined to one economy or a region but having a global contagion effect. Main reason behind the rapid spread of financial crisis was that USA accounts for one fourth of world's GDP and a slowdown there has corresponding influence everywhere. Global financial crisis that emanated from United States (US) has led to liquidity and solvency problems all around the world. Countries like the UK and USA which have been at the centre of the crisis see their currencies in danger of sliding, both because their governments need to borrow abroad and also because of general lack of confidence. Global financial crisis had gripped the entire world economy, Europe, Australia, Asia, North America, South America were all severely hit by adverse gravity of the crisis.

The financial crisis beginning in 2007 impacted the mutual fund industry along with all other sectors of the financial markets. As an immediate effect of the global financial crisis, net assets of mutual funds worldwide declined sharply by over 25 per cent (in US$ terms) in 2008. The US, which has the world's largest mutual fund industry comprising almost half the global industry share in terms of assets, had registered a 20 per cent decline in assets in 2008. The disruptions in financial markets around the world that started in 2007 led many institutional investors to seek the liquidity and safety of money market funds that invest primarily in US government securities *(Bose Suhismita. 2012, p.77).* In an era of integrated financial markets, global trends are expected to have an effect on the progress of the Indian asset management industry as well. Indian asset management industry had an increasing trend from 2003-04 but witnessed sharp decline in 2008-09. The asset under management decline by Rs. 87852 crore in 2008-09 due to the effect of financial crisis and inflow of the industry showed a negative value (-28297 crore). For analysis purposes the period of 2000-01 to 2006-07 is considered as a pre financial period and period of 2007-08 to 2013-14 is taken as post crisis period. The following graph depicts the asset under management in the pre- crisis period and post crisis period.

Graph - 5.11 AUM in Pre and Post Crisis Period



Source: AMFI Reports.

Null Hypothesis-5:

There is no significant difference in the size of corpus of asset management companies in Pre and Post Financial Crisis period.

Alternate Hypothesis-5:

There is a significant difference in the size of corpus of asset management companies in Pre and Post Financial Crisis period.

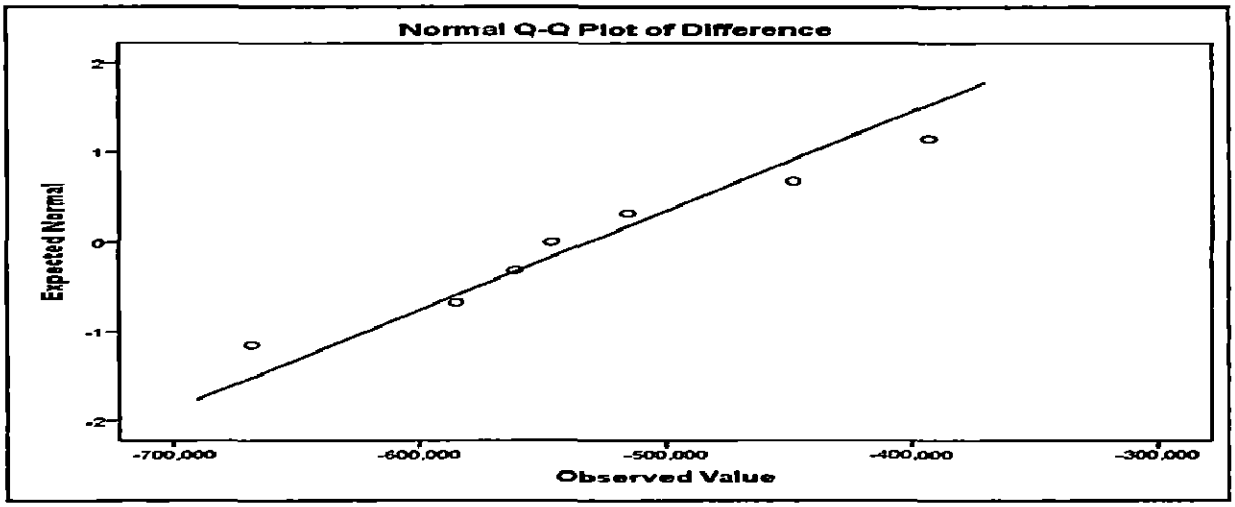
In this section Paired sample t test is applied in order to test the hypothesis that there is no significant variation in the performance of the Asset Management Industry between Pre-Financial Crisis period and Post Financial Crisis period. In this testing period of 2000-01 to 2006-07 is considered as a pre financial period and period of 2007-08 to 2013-14 is taken as post financial crisis period.

Table - 5.39 Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Difference	.146	7	.200*	.982	7	.968

Table 5.39 presents the test of normality of the difference between pre AUM and post AUM for applying the paired sample t test. The Shapiro-Wilk test shows the significance p values .968 which is more than critical p value 0.05, implies that data set is normal.

Graph - 5.12 Normality Q-Q Plot of Difference between Pairing



Similarly the curve pattern in the Q-Q-plots also suggests that the data set of difference in AUM of the industry in pre crisis period and post crisis period is normal as the observed values are lie near to linear trend line and indicating the absence of outliers.

Table - 5.40 Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
AUM	Pre Crisis	159730.14	7	89634.02	33878.47
	Post Crisis	660505.42	7	168961.95	63861.61

Paired sample statistics presents the mean value of asset under management in pre financial crisis period i.e. Rs. 159730.14 crore and mean value of post financial crisis period i.e. Rs. 660505.42 crore. The standard deviation shows the variability in both period and it can be observed from the table that post financial crisis period have the greater mean as well as standard deviation as compared to pre crisis period.

Table - 5.41 Paired Samples Correlations

		N	Correlation
AUM	Pre-Crisis & Post-Crisis	7	.881

Paired sample correlation shows the relationship between the asset under management in pre crisis period and post crisis period. The correlation value is .887 which indicates the high positive correlation and exhibits the existence of the relationship between the variables.

Table - 5.42 Paired Samples t-test

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
AUM	(Pre Crisis – Post Crisis)	-500775.28	99510.56	37611.45	-592807.20	-408743.36	-13.31	6	.00

Table 5.42 of Paired Sample T Test shows the result of the hypothesis. The mean value represents the mean of difference between the pre crisis AUM and post crisis AUM. This mean value is lie between the lower and upper limit of confidence interval of the difference at 95 per cent. If the test is applied 100 times, 95 times the true value for the difference would lie in the 95 per cent confidence interval. The significance p value is .000 which is less than the 0.05. It indicates the rejection of null hypothesis and acceptance of alternate hypothesis. There is a strong evidence (t= -13.31, p= .00) from the table that there is a statistically significant difference between the AUM in pre financial crisis period and AUM in post financial crisis period.

MARKET COMPETITIVENESS OF ASSET MANAGEMENT COMPANIES

The Indian asset management companies are increasingly offering a variety of product innovations to capitalize the growth opportunity. Indian asset management industry is open to foreign firms, which are free to operate either independently or in alliance with domestic (either banking or non-banking) institutions. In recent years, domestic and predominantly domestic asset managers have meaningfully outgrown predominantly foreign players *(Deloitte Center for Financial Services. 2012, p. 13)*. The study related with concentration and competition has an importance for determine the market structure in the asset management industry. Similarly to other industries, the degree of competition is important for the efficient performance of the industry *(Ferreira M. A. & Ramos S.A. 2009, p.3)*. To test the market competitiveness of the asset management industry concentration analysis has been done by using the HHI index.

Null Hypothesis-6:

The market competitiveness is lacking among the asset management companies in India.

Alternate Hypothesis-6:

There is market competitiveness among the asset management companies in India.

Concentration Analysis

The Herfindahl-Hirschman index, better known as the Herfindahl index, is a statistical measure of concentration (Rhoades S. A., 1993, p. 188). It is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them. The index was developed independently by the economist *A.O. Hirschman (1945)* and *O. C. Hefindahl (1950)*. The HHI accounts for the number of firms in a market, as well as concentration, by incorporating the relative size (that is, market share) of all firms in a market. It is calculated by squaring the market shares of all firms in a market and then summing the squares, as follows:

$$HHI = \sum_{i=1}^{N} s_i^2$$

or

$$HHI = s_1^2 + s_2^2 + s_3^2 + \ldots + s_n^2$$

where,

H =Herfindahl-Hirschman index,

S_i = Market share of i^{th} firm in the market,

N = Number of firms.

Table - 5.43 Result of Concentration Analysis of the Asset Management Industry in India

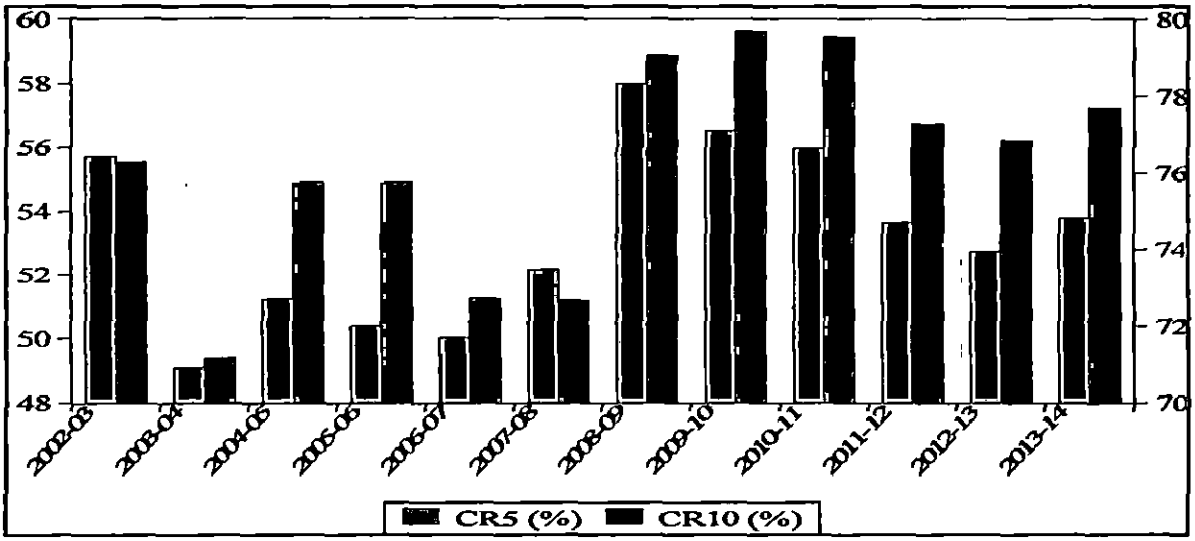
Years	N	AV_ Mk _sh (%)	CR10 (%)	CR5 (%)	HHI
2002-03	32	3.13	76.29	55.73	0.0820
2003-04	32	3.13	71.17	49.10	0.0656
2004-05	29	3.44	75.74	51.25	0.0733
2005-06	29	3.44	75.75	50.41	0.0710
2006-07	30	3.33	72.73	50.02	0.0720
2007-08	33	3.03	72.68	52.16	0.0762
2008-09	35	2.85	79.08	58.01	0.0833
2009-10	38	2.63	79.70	56.55	0.0804
2010-11	41	2.44	79.54	55.98	0.0790
2011-12	44	2.27	77.28	53.66	0.0737
2012-13	43	2.32	76.85	52.73	0.0720
2013-14	46	2.17	77.70	53.80	0.0746
Average	36	2.85	76.21	53.28	**0.0753**

St. dev	6.16	0.47	2.79	2.84	0.0051
Maximum	46	3.44	79.70	58.01	0.0833
Minimum	29	2.17	71.17	49.10	0.0656

Source: Compiled from various AMFI Reports.
(Since the company wise data is not available for 2000-01 and 2001-02, the concentration analysis is conducted from 2002-03).

The above analyses the concentration in the asset management industry in India since 2002-03. The various column contains total number of companies (N), average market share (Av_mk _ sh), market share of ten largest companies (CR10), market share of five largest companies (CR5) and Herfindahl- Hirschman index (HHI). Last rows present descriptive statistics: average, Standard deviation, maximum and minimum. It can be observed from the table that total numbers of companies are maximum in 2013-14. The average market share of a single company has varied from 2.17 to 3.44 in last 12 years. The market share of the ten largest companies shows that more than seventy per cent share of the asset management industry is held by these companies. In 2009-10, it was at maximum when 79.7 per cent of the corpus contributed by top ten companies. Similar picture has been shown by the CR5 as the top five companies hold more than half of the corpus of the asset management industry. At the end of 2013-14 the market share of these companies stood at 53.28 per cent.

Graph - 5.13 Trends of Average Market share of Top 5 and Top 10 Asset Management Companies



The HHI index of last 12 years showed that there is unconcentrated market condition exist in the industry. According to the US Horizontal Merger Guidelines when the value of HHI lies between 0.01 to 0.1, it indicates the unconcentrated market condition in the industry. The average value of last twelve years was 0.0753 which shows the asset management industry is to be considered as competitive market structure during the study period and it proves rejection of null hypothesis and acceptance of alternate hypothesis. It can be concluded from the result that there is market competitiveness among the asset management companies in India indicating the existence of oligopoly market.

5.5 CONCLUSION

This chapter evaluates the performance of sample mutual fund schemes and an empirical investigation of asset management industry. The sample size of 62 schemes is taken from the institution sponsorship and investment objective for measuring the performance during the period of 2000 to 2014. After applying the portfolio performance measures, it is found that majority of the schemes are not providing significant positive return in terms of relative risk adjusted measures and absolute risk adjusted measures. The Indian asset managers must improve their market timing skills by focusing on the external market related information so as to promote the confidence among investors who prefer to invest their hard earned money and small savings in mutual funds *(Ramesh B. et al. 2014; p.16)*. The result of market timing models reveals that the Asset managers getting superior performance due to their selectivity and they are not able to time the market successful. The analysis has also identified the various essential attributes and their impact on the growth of asset management industry. The comparative analysis demonstrates the dominance of the private sector asset management companies. Performance of asset management companies was satisfactory during the crisis period and concentration analysis revealed the existence of unconcentrated market structure among the asset management companies in India.

REFERENCES

Hirschman A. O. (1945). National Power and the Structure of Foreign Trade, University of California Press, Berkeley.

Ashraf S. H. & Sharma D. (2011). Global financial crisis and its impact on Indian insurance industry.*International Journal of Research in Commerce & Management, 1*(4), 49-56.

Association of Mutual Funds in India. (2014). AMFI monthly report, retrieved from http://www.amfiindia.com/research-information/amfi-monthly. (March 2000 to March 2014).

Bose S. (2012). Some aspects of Indian mutual funds' performing during the recent financial crisis. Money & Finance, ICRA Bulletin, 75-111.

Deloitte Center for Finacial Services. (2012). Growth opportunities for financial Services in India: Investing for the long term in the world's largest democracy, 1-16, retrieved from https://www.deloitte.com/assets/DcomUnitedStates/Local%20Assets/Documents/FSI/US_FSI_GrowthOpportunutiesforFinancialServicesIndia_100412.pdf

Fama, E. F. (1972). Components of Investment Performance. *Journal of Finance,,27,* 551- 567.

Ferreira M. A. & Ramos S.A. (2009). Mutual fund industry competition and concentration: International Evidence, Unpublished paper, Universidade Nova de Lisboa, Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1343096&download=yes

Henriksson R. D. & Merton, R. C. (1981).On Market Timing and Investment performance. II. Statistical Procedures for Evaluating Forecasting Skills. *Journal of Business, 54*(4), 513-533.

Jensen, M. C. (1968). The performance of mutual funds in the period 1945-1964. *Journal of Finance, 23*(2), 389–416.

Karlsson T. (2005). Mutual fund performance: Explaining the performance of Swedish domestic equity mutual funds by using different fund characteristics, (Doctoral Thesis). *School of Economics and Commercial Law.Goteborg University.*

NSE. (2014). Historical Index data. Retrieved from http://www.nseindia.com/products/content/equities/indices/historical_index_data.htm

NSE. (n.d.). National Stock Exchange of India Ltd: Leadership through change, Retrieved from http://www.nse-india.com/content/press/leadership.pdf

O. C. Herfindahl. (1950). Concentration in the US Steel Industry. (*Doctoral Thesis),* Columbia University New York.

Planning Commission. (2014), Data Book for DCH. Retrieved from http://planning commission.gov.in/data/datatable/1203/table_3.pdf

Ramesh B. et al (2014). Market timing ability of Fund managers- Indian Experience. Indian *Journal of Commerce, 67*(1), 2-16

Rhoades S. A. (1993). The Herfindahl- Hirschman Index, 188-189 Retrieved from http://fraser.stlouisfed.org/docs/publications/FRB/pages/1990-1994/33101_1990-1994.pdf

Sadhak H. (2009). Mutual funds in India: Marketing Strategies and Investment Practices (Second Ed.). *Sage Publication,* 305-402.

SEBI. (n.d.). Securities and Exchange Board of India: SEVI Investor education program. Retrieved from http://www.sebi.gov.in/faq/mf_faq.html

Sharpe, W.F. (1966). Mutual Fund Performance. *Journal of Business*, *39,* 119-138.

Treynor J. & Mazuy K. (1966). Can mutual funds outguess the market? *Harvard Business Review*, *44*, 131–136.

Treynor, J. L. (1965). How to rate management of investment funds? *Havard Business Review. 43*(1), 63-75.

Tripathy N. P. (2005). An Empirical evaluation of market timing abilities of Indian fund managers on equity linked saving scheme. Delhi Business Review, 6(2), 19-27.

Zabiulla. (2013). Portfolio strategies of fund managers in Indian capital market. *IIMB Management Review,26,* 28-58.

The previous chapter covers the detailed analysis and interpretation of investment performance of asset Management Companies in Indian capital market for the period of April 2000 to March 2014. This chapter deals with the finding, conclusion and suggestions based on the outcome of analysis and interpretation of the research and also provide the limitation and direction for future research. An attempt has been made to summarize and conclude the research and to give the important suggestions in order to achieve the objective of the study.

6.1 FINDINGS OF THE STUDY

The findings are based on in depth investigation of the research problem and the analysis of the data. The major findings of the research are:

Findings related with Investment Performance Measures

- The corpus size indicates strong position of Asset Management Companies in Indian capital market. Indian Asset Management Companies has grown at the CAGR of 17.86 per cent during the study period. Significant growth has been witnessed due to competency of Asset Management Companies and their ability to generate consistent risk adjusted return in long run.
- From the Relative risk adjusted return analysis, it is found that 46 sample mutual fund schemes were outperform the benchmark index in Treynor Ratio and 37 sample mutual fund schemes were outperform the benchmark index in Sharpe ratio. Most of the outperforming schemes belong to growth and hybrid schemes. The focus on equity related instruments in the asset allocation strategy is one of the important factors that enable mutual fund schemes to outperform the market. Long run investment especially in Blue Chip stocks also helped the fund manager to generate the positive risk adjusted return during the study period.
- It is found that 7 schemes in Treynor measure and 27 schemes in Sharpe measure are found to be positive and significant. It shows that fund manager are dealing efficiently with controllable part of the risk with their specialize knowledge but systematic risk is still matter of concern to Asset Management Companies.

- The Absolute risk adjusted return also provide the same picture as 24 schemes found positive and significant in Jensen Measure in which 20 schemes from growth, 4 belong to hybrid schemes. These positive and significant schemes

generates the differential return i.e. fund return is more than CAPM return indicates the superior performance of stock selection ability of fund managers.

- Fama Measure reveals that 25 schemes have shown negative net selectivity and the rest 37 scheme (59.68 per cent) have reported positive net selectivity. These positive schemes implies that fund manager have taken diversifiable risk that has been compensated by extra returns and schemes are able to get some additional compensation for their diversification activities.

Findings related with Market Timing Measures

- The result pertaining to market timing abilities of asset management companies in terms of both the two models i.e. Treynor & Mazuy and Henriksson and Merton, do not support the hypothesis that Indian Asset management companies are able to time the market correctly. From the analysis we found that mutual fund schemes are able to time the market but in wrong direction and few schemes are able to time the market correctly.
- The analysis reveals that superior performance of sample mutual fund schemes during the study period have occurred due to stock selection ability of asset management companies rather than their market timing abilities.

Table 6.1 Comparative Analysis of Sample Mutual Fund Schemes

Schemes	Rank				
	Treynor Measure	Sharpe Measure	Jensen Measure	T&M Model	H&M Model
Baroda Pioneer Equity Linked Saving Scheme 96	48	58	56	61	1
Birla Sun Life 95 - Growth	38	23	24	26	3
Birla Sun Life Advantage Fund – Growth	19	38	31	51	4
Birla Sun Life Buy India Fund – Growth	31	22	17	27	26
Birla Sun Life Gilt Plus Liquid Plan – Growth	61	1	55	35	32
Birla Sun Life Gilt Plus P F Plan – Growth	53	15	47	43	60
Birla Sun Life Income Plus – Growth	62	5	44	24	22
Birla Sun Life India Opportunities Fund – Growth	32	50	39	7	34
Birla Sun Life MNC Fund - Growth	8	13	12	14	2
Birla Sun Life Monthly Income Plan – Growth	15	2	40	10	5
Birla Sun Life New Millennium –	45	51	33	15	6

Chapter-6

CONCLUSION AND SUGGESTIONS

Growth					
Canara Robeco Gilt PGS- Growth	58	10	45	23	7
Canara Robeco Monthly Income Plan – Growth	60	9	46	47	8
DSP BlackRock Balanced Fund – Growth	9	20	19	5	9
DSP BlackRock Bond Fund - Retail Plan – Growth	1	3	54	6	10
Escorts Income Plan – Growth	55	43	18	11	12
Franklin India Bluechip – Growth	30	19	9	13	13
Franklin India Opportunity Fund – Growth	41	37	27	46	14
Franklin India Prima Plus – Growth	28	18	10	34	15
Franklin Infotech Fund – Growth	44	52	38	12	17
Franklin Templeton India Balanced Fund – Growth	40	21	23	41	18
Templeton India Pension Plan – Growth	17	12	30	39	19
HDFC Equity Fund – Growth	16	14	4	40	21
HDFC High Interest Fund-Dynamic Plan – Growth	4	6	50	59	24
HDFC Prudence Fund – Growth	6	8	7	16	25
HDFC Taxsaver – Growth	22	27	11	18	27
HDFC Top 200 – Growth	29	17	6	42	28
ICICI Prudential Balanced - Growth	10	30	26	32	29
ICICI Prudential FMCG – Growth	3	11	8	28	35
ICICI Prudential Technology Fund – Growth	24	39	28	22	38
ICICI Prudential Top 100 Fund – Cumulative	51	46	2	25	39
ICICI Prudential Top 200 Fund – Growth	18	29	14	60	40
ING Core Equity Fund – Growth	42	55	51	50	41
ING Income Fund - Regular Plan – Growth	7	7	52	44	42
JM Balanced – Growth	49	57	57	19	43
JM Equity – Growth	25	49	37	58	46
Kotak 50 – Growth	33	33	22	1	47
Kotak Balance – Growth	47	61	61	56	49
Kotak Bond Deposit – Growth	2	4	49	29	50
L & T Triple Ace - Regular – Growth	13	28	58	54	51
L & T Ultra Short Term Fund - Regular – Growth	46	60	60	17	52
LIC Nomura Bond Fund – Growth	57	24	43	20	55
LIC Nomura Equity Fund	54	41	32	45	56
LIC Nomura MF Growth Fund – Growth	37	42	34	4	59
LIC Nomura Tax Plan	27	53	48	36	62

PRINCIPAL Balanced Fund – Growth	20	35	36	2	23
PRINCIPAL Index Fund – Growth	56	36	25	37	16
Reliance Growth – Growth	52	45	1	49	20
Reliance Vision – Growth	59	16	5	55	30
SBI Magnum Balanced Fund – Growth	5	48	41	38	33
SBI Magnum Equity Fund – Growth	21	54	42	8	36
SBI Magnum Multiplier Plus 93 – Growth	36	44	35	21	37
SBI Magnum Tax Gain Scheme 93 – Growth	23	56	53	57	44
Sundaram Growth Fund – Growth	39	34	21	3	53
Tata Balanced Fund – Growth	14	26	20	33	54
Tata Ethical Fund - Appreciation (Formerly Select Equity Fund)	11	40	29	30	57
Tata Pure Equity Fund – Growth	35	25	13	9	58
Tata Tax Saving Fund	43	59	59	53	11
Tata Young Citizens Fund	50	62	62	52	45
Taurus Bonanza Exclusive Growth Scheme 95	12	32	16	62	31
Taurus Discovery Fund - Growth	34	47	3	31	48
Taurus Starshare Fund - Growth	26	31	15	48	61

Source: Researcher compilation

Other Findings

- Multiple regression depict that Penetration is a major significant factor which positively influence the growth of Asset Management Companies. Any increase in the GDP directly or indirectly initiate the saving and investment pattern in the economy and turnover is also found to be statistical significant with negative coefficient. The study reveals that there is a positive relationship between the fluctuations of the stock market and growth of Asset Management Companies. The direction of change in stock market is parallel to the growth of Asset Management Companies.
- The comparative study confirmed the increasing dominance of private sector Asset Management Companies during the study period. The share of Public Sector Asset Management Companies was 71.59 per cent in 2000-01 which declined to 19.43 per cent in 2013-14 while the share of Private sector Asset Management Companies was 28.40 per cent in 2000-01 which has risen to 80.57 per cent in 2013-14. Deregulation and Splitting of UTI had provided the platform to enhance the opportunities for Private sector companies. Apart from that the public sector

Asset Management Companies have failed to come up to the common Investors expectations in terms of after sales service, timely delivery of unit certificates and dividend warrants, promptness in grievance redressed, investors right adherence, adequate and timely disclosure of information and under performance of most of the mutual funds schemes as against market performance. These draw backs provided an opportunity to private Asset management companies to grab the market. The CAGR of 28.40 per cent reflects the superior investment performance of private sector Asset Management companies during the study period.

- The Asset Management Industry was the least effected industry in India during the financial crisis period. The downtrend in the corpus of Asset Management Companies was not as severe as witnessed by capital market and financial institutions. The reason being that investments made in the mutual fund schemes are for long term perspective and the stock selection in portfolios was fundamentally strong. The principle of diversification helps in minimizing the risk level and reduces the chances of extreme loss of capital.
- It is clear from the concentration analysis that market competitiveness among the Asset Management Companies is unconcentrated. Due to regular entry of new companies in the industry, most of the large companies are unable to dominate the market. The asset of the industry is not concentrated however collectively top 10 companies have shown some abilities to influence the market structure as they hold more than 75 per cent of the assets during the study period.

Table 6.2 Summary of Hypotheses Testing

S. No.	Hypotheses	Research Technique	Inference
1	The investment performance of mutual fund schemes managed by Asset Management Companies is not providing consistent risk adjusted return to unit holders in Indian capital market.	Treynor Measure	7 Schemes are Positive and Significant out of 62 sample schemes.
		Sharpe Measure	27 Schemes are Positive and Significant out of 62 sample schemes.
		Jensen Measure	24 Schemes are Positive and Significant out of 62 sample schemes.
2	The Asset management Companies in India are not having any specific investment strategy to time the market.	Treynor & Mazuy Market Timing Model	2 Schemes are Positive and Significant out of 62 sample schemes.
		Henriksson & Merton Market Timing Model	3 Schemes are Positive and Significant out of 62 sample schemes.
3	There is no significant impact of Penetration, Scheme Size, Turnover and Stock Market fluctuations on the performance of Asset Management Companies in India.	Multiple Regression	Penetration- Significant p value (0.040) < 0.05
			Scheme Size-Insignificant p value (0.144) > 0.05
			Turnover- Significant p value (0.040) < 0.05
			NSE- Significant p value (0.000) < 0.05
4	There is no significant difference in the AUM of public sector and private sector Asset Management Companies in India.	Independent Sample t-test (one tail)	P value (0.0015) < 0.05 (Significant)
5	There is no significant difference in the size of corpus of Asset management Companies in Pre and Post Financial Crisis period.	Paired Sample t- test	P value (0.000) < 0.05 (Significant)
6	The market competitiveness is lacking among the Asset Management Companies in India.	HH Index	Index value 0.0753 (Unconcentrarted Market)

Source: Researcher Compilation

6.2 CONCLUSION

The Indian capital market having a long history spanning over a century has passed through the most radical phases. It has witnessed extraordinary developments and innovations during the nineties. One such development was the improved role of the mutual funds in financial intermediation. Mutual funds in India have fast emerged as an important instrument of household savings and asset management companies channelize these assets in the investment platform to capital market. Indian asset management companies have emerged as strong financial intermediaries and they play a significant role in bringing stability into the financial system and efficiency in resource allocation. This study provides a comprehensive and integrated examination of performance of asset management companies by analyzing a sample of 62 mutual fund schemes. This research further distinguishes itself from the previous literature by making several additional contributions. These include a detailed discussion of sample mutual fund performance based on sponsorship institution and investment objective and explore the market timing abilities of asset management companies to predict the market related information using most recent daily data set from April 2000 to March 2014. Other aspect are also covered to find out the impact of specific determinants on the growth of asset management companies, comparing performance of public and private sector companies, performance of asset management companies in pre and post crisis period and assessing the severity of competition among the asset management companies during the study period.

Sharpe measure, Treynor measure Jensen Model and Fama measure are used to determine the investment performance. It can be concluded from the analysis that asset management companies are able to minimize the controllable part of the risk as majority of the schemes are found to be significant in Sharpe ratio but results of Treynor measure indicate that systematic risk is an issue of concern as number of significant schemes are reduced. To assess the market timing abilities, Treynor & Mazuy and Henriksson & Merton market timing model are used which concludes that very few schemes are having the significant market timing abilities. Stock selection ability and portfolio construction is found to be the major component to generate the risk adjusted return by the asset management companies from the mutual fund schemes.

The significant factors impacting growth of the asset management companies are also analyzed through multiple regression techniques. The penetration and fluctuation of stock market are the positive significant factors that are useful in predicting the growth of asset management companies, turnover is significant with negative coefficient but scheme size is insignificant. The result suggests that if other things being equal, the higher the value of GDP and NSE index, the greater the potential growth of asset management companies.

The performance of private sector asset management companies in comparison with public sector is completely changed during the study. 71.59 per cent share of the industry was managed by public sector in 2000-01 but now 80.57 per cent of the AUM is in the hands of private companies. The performance of these companies is satisfactory during the financial crisis period. Negative figures were recorded in asset management industry but it did not severely affected as compare to stock market and other financial institutions which were crashed during the financial crisis. In the post crisis period asset management companies touched new heights and industry managed INR 905120 crore of funds at the end of March 2014. HHI techniques gives us idea about market competitiveness among the asset management companies which showed that unconcentrated market conditions were prevailing during the study period and no individual company was in a situation to dominate the market.

6.3 SUGGESTIONS

The Indian asset management companies have come a long way since entry of private and foreign companies have been allowed to participate. The industry has shown maturely by introducing best practices, increasing the transparency levels and raising the bar on investor friendliness. Following suggestions may be taken into considered to improve and strengthen the overall performance of the asset management industry-

Consolidation of funds

The Indian asset management companies deals with more than 1600 mutual fund schemes which have different options such as growth, dividend, re-investment with multiple frequencies - daily, monthly, quarterly, etc. In a country where financial literacy is low, choosing among the huge span of funds is a major challenge for investors. Investors have to choose from funds with similar or slight variation in investment objective and names of the funds do not indicate much about their

characteristic. Therefore it is necessary for companies to consolidate funds with similar objectives and also provide funds name funds that are simple to understand and also give some indication of the risk return trade-off and investment horizon. SEBI's latest decision on product labeling which directs AMCs to color code all funds based on risk and return measures besides.

Transparency in product positioning for retail investors

The assets under management of the industry are so far been mainly dominated by institutional investors and HNIs. Retail investors have been largely conspicuous by their meager presence. The share of mutual funds in household savings continued to be less than 5 per cent. Only the 'knowledgeable' or 'educated' investors know better to avail the benefit of mutual funds. Mostly retail investors have invested in equity funds, but it is also not on a regular basis. The only category where retail investors has grown exponentially is in gold ETFs, mainly due to the long bull-run in gold prices and general awareness about gold as an asset class. Thus Asset Management Companies should focus their product positioning for retail investors with simple product. Products must be positioned on the basis of risk-reward potential. Investors should take the help of financial planning specialists or refer to independent rankings to select the right funds as well as periodically monitor their performance.

Role of Banking in distribution of Mutual Fund schemes

The first point of contact for the common man with the financial world is the local bank branch. With more than 80,000 bank branches spread across the country, mutual fund penetration can significantly improve even if 50 per cent of these branches are trained to sell mutual funds. With majority of AUM concentrated in the metros, the banking network can help expand the reach of mutual funds across the length and breadth of the country. SEBI's recent regulation which allows AMCs to charge an additional 0.30 per cent on inflows coming from beyond the top 15 towns is a welcome step towards ensuring larger and diverse retail participation. It is encouraging to note that the data on commissions published by AMFI indicates that the banking sector is the largest distributor segment, accounting for more than 40 per cent of the total commissions paid in 2013-14. The ATM network can also be used in selling of mutual fund schemes.

Risk Management

Innovation in the financial market has lent depth and dynamism to the capital market, but at the same time, it has also increased the level of risk. This necessitates the

development of risk management as a core function of mutual funds operations. The basis of risk management is risk measurement. An effective risk management consists of structured risk standard approach, including a clearly laid down investment philosophy, a clear definition of the fiduciary responsibility of asset management companies, a fund specific risk policy and specific internal guidelines on risk tolerance in relation to the portfolio strategy. The concept of risk standard is associated with risk budgeting. Since most of Indian asset management companies funds have an indifferent aptitude to risk management, it is necessary that AMFI and SEBI give serious thought to the matter and jointly devise a risk standard documenting approach to risk management for mutual fund schemes.

Improve the standard of investment research

The future return of any investment depends on the risks associated with it. Risks and return are not a matter of mere perception but an outcome of various heterogeneous interactions. Management decisions therefore need to be based on certain hard facts, obtained through scientific analysis and forecasting. For this reason, Investment research occupies an important position in investment management. In Indian context, investment research has become the victim of indifferent attitude of management. There is neither any serious research mind set nor many competent persons are involved in the area of research. The failure of the many funds and investment decisions of several asset management companies bear testimony to the poor state of research. Therefore regulator should give direction to asset management companies to set up a multidisciplinary investment research department.

Enhancement of Systematic Investment/Withdrawal/Transfer plans

Asset management Companies need to enhance the growth of their systematic investment plans. These plans have the capacity to deal with volatility over a long-time horizon and generate steady returns. These plans also provide platform to tiny savings of small investors into investment at regular period of intervals and also facilitate the liquidity at any stage of investment. Asset Management Companies may also provide the portability of mutual fund schemes so that an investor easily can transfer his investment from one asset management company to another on the same folio. It will help in reducing the paper work to a major extent and encourage the investors to participate in the mutual fund schemes.

Innovation

Innovation distinguishes between a leader and a follower. It is true for any industry. Over the years, different mutual fund products and services have caught investors' attention – such as fund of funds, ETFs and systematic investment plans (SIPs). The asset management industry in developed markets has a higher penetration through innovative products which offer long-term wealth creation options such as lifecycle and target maturity funds. In the US retirement industry a huge amount of corpus invested in hybrid funds (a bulk of target date and lifestyle funds are counted in this category). The nature of these products is such that the asset allocation between equity and fixed income is adjusted based on the investor's time horizon. Additionally, there are annuity products which provide regular income in the post-employment years. India too needs many more innovations in the retirement sector. According to the United Nations population statistics, India's share of people aged 65 or above is expected to increase from 5per cent to 14per cent between 2010 and 2050, while the share of oldest age group (80 years or above) is expected to triple from 1per cent to 3per cent. With only 12per cent of India's current population under pension coverage, there is a need for innovative product in the area of retirement segment.

Improve Financial Literacy

One of the weaknesses of the asset management industry is the low level of financial literacy among the investors. For this reason, investor often takes wrong decisions and some are even incapable of taking decisions on their own. The problem can be tackled through a two way approach-

- Improving the general standard of functioning of agents and brokers and imposing stringent penalties on those who mislead the public with wrong advice.
- Improving the quality of sales literature and the offer document by incorporating facts and figures that enable the investors to take the decision with detailed information.

Finally AMFI can play the most important role in educating the investors by producing simple literature, released through media on operation of asset management companies, investment strategies, break-up total costs charged by a fund, method of calculating return of the mutual funds. It could also conduct timely surveys of investors to understand their perceptions, modes of investment and level of understanding.

Technology

Investors must be aware that information on funds such as portfolio composition, return comparison with the stated benchmark and fund management details are available on Asset Management Company's websites. Transparency and easy access to funds will increase investor confidence. With more than half the country owning mobile phones, the latter will clearly emerge as the communication medium in the years ahead. Language barriers and financial illiteracy can be reduced with multi-lingual applications that can be accessed through handheld devices and on social media. Technology will also help in straight-through processing of trades through the remotest corner of the country, besides collation and analysis of customer behavior which will help in selling mutual funds in an effective manner. Fund houses can assist clients in tracking their portfolios through intermediary platforms and wrap services (consolidates and manages an investor's portfolio or financial plans through a single window). Investors can thus view their entire portfolio at a single click, enabling them to track their current financial position on a daily basis as well as receiving alerts. They can also understand their total tax liability and maintain documentation of all purchases, sales, deposits and withdrawals in one repository.

Strengthening Corporate Governance

Institutionalization of the financial and capital market has underlined the importance of the corporate governance among asset management companies, particularly as they have a considerable influence on the market. SEBI has taken some useful steps which are not enough. It should further design a mechanism to monitor corporate governance in asset management companies, as well as appropriate penal action for any violation of the same.

Developmental role of regulators

SEBI has introduced a broad spectrum of policies to promote healthy regulation in the asset management industry and to protect the investor's interest. At the same time SEBI may focus on vital issues like the cost return relationship of mutual fund investment, risk management practices, funds management strategies, corporate governance, service delivery and the investor's perceptions regarding the funds and regulators. In the US, SEC frequently conducts in depth studies in the interest of both the investors and industry. SEBI can consider similar steps to remove certain regulatory and operational weaknesses.

Target the Global Investment

In order to increase global investment, the asset management companies must rapidly expand their overseas operations. Indian asset management companies must develop their offshore mutual funds in order to attract the foreign investment. The growth rate of India is higher comparatively to other developing nations and it is among the favorite investment destinations that provide consistent return to foreign investment. The strategy should be to focus on developing mutual fund schemes which satisfy the need of foreign investors.

6.4 LIMITATIONS OF THE STUDY

The following are the limitations of the present study:

- All the official sources, from where the data has been taken do not provide the complete data. The data available is only for the recent three or five years which is not enough to conduct a research. This study based on the data provided by corporate bodies.
- The study is restricted to the sample of 62 mutual fund schemes related to 19 asset management companies in India.
- Some of the benchmark indexes are established after the commencement of study period. In place of such indexes S&P BSE 30 index is used as a benchmark proxy.
- This research mainly based on the secondary sources of information therefore errors of secondary data bound to be occurred.
- The implications of the performance evaluation measures have some assumption. These assumptions have to be considered while applying different models in research analysis.
- In the concentration analysis, HHI index value is shown from 2002-03 to 2013-14. The company wise data of asset under management is not available for 2000-01 and 2001-02 which is required for concentration analysis.

6.5 DIRECTIONS FOR FUTURE RESEARCH

Research is continuous process that provides opportunities for future researches. The present study is an attempt to analyze the growth and development of asset management companies in Indian capital market. Various portfolio evaluations measures and market timing models have been applied in this thesis to assess the

investment performance, selectivity and market timing abilities of asset management companies in India for the period of 2000-01 to 2013-14. The scope for future research is summarized below:

- The researches may be conducted for individual sponsorship of asset management companies such as Bank sponsored asset management companies, Institution asset management companies and Private asset management companies. A comparative or case study may also be conducted on sub classification of AMC's such as JV-Predominantly Indian, JV- Predominantly Foreign, Indian companies and foreign companies.
- This study considers the classification of the schemes according to investment objective (Growth, Income and Hybrid). However research can be conducted on the different categorization such as on the basis of investor's preferences (SIP, SWP, and STP), schemes based on capitalization (Large Cap, Mid cap and Small cap) and special schemes like Exchange Traded funds, Fund of Funds, Index Funds, Money Market Funds and Offshore Funds.
- This research confine to portfolio performance measures and unconditional model of market timings, however future researches may apply conditional model of market timing, DEA techniques, Fama- French three factor models and Carhart four factor models.
- The area of research may also include the determinants not touched in this research such as impact of inflation, GDS (Gross Domestic Saving), Trade Openness and Regulations on growth and development of asset management companies in India.
- The other areas of research are the merger and acquisition within the industry and the impact of major events which took place in industry since privatization such as UTI bifurcation and regulatory reforms.

BIBLIOGRAPHY

BOOKS

Hirschman A. O. (1945). National Power and the Structure of Foreign Trade, University of California Press, Berkeley.

Rao N. S. & Ravindram M. (2002). Performance Evaluation of Indian mutual funds. *Proceedings of 15th Australasian Finance and Banking Conference held in Sydney (Australia) on 16-18 December 2002.*

Rustagi R.P. (2008). Investment Analysis and Portfolio Management. *Sultan Chand & Sons. ISBN 978-81-8054-632-7.*

Sadhak H. (2009). Mutual funds in India: Marketing Strategies and Investment Practices (Second Ed.). *Sage Publication,* 305-402.

Tripathi N. P. (2007). *Mutual Funds in India: Emerging Issues*. Excel Books. New Delhi, India, 1-269, ISBN: 81-7446-535-9

RESEARCH PAPERS

Angelidis T. et al. (2013). Revisiting mutual fund performance evaluation. *Journal of Banking & finance, 37*, 1759-1776.

Annapoorna M.S. & Gupta P.K. (2013). A comparative analysis of returns of mutual fund schemes ranked I by CRISIL. *Tactful Management Research Journal, 2*(1), 1-6.

Ashraf S. H. & Sharma D. (2011). Global financial crisis and its impact on Indian insurance industry. *International Journal of Research in Commerce & Management, 1*(4), 49-56.

Avramov D. & Wermers R. (2005). Investing in mutual funds when returns are predictable. *Journal of economics, 81*(2), 339-377.

B. Sarita & Rani M. (2012). A comparative analysis of mutual fund schemes in India. *International Journal of Marketing, Financial Services & Management Research, 1*(7), 67-79.

Banerjee C. & Shah A. (2012). Deepening of Capital Markets: Enabling Faster economic Growth. *Confederation of Indian Industry*, 1-46.

Banko J. et al. (2010). Economies of scope and scale in the mutual fund industry. *Managerial Finance, 36*(4), 322-336.

Bhattacharya and Samanta. (2001). A tale of two indices: the story of the NASDAQ and The Sensex. *Journal of Quantitative Economics, 1*(1), 89-102.

Biswal P. C. & Kamaiah B. (2001). Stock market Development in India: Is there any trade break? Economic and Political Weekly, 36(4), 377-384.

Bodson L. et al. (2012). A global approach to mutual funds market timing ability. *Journal of Empirical Finance, 20*, 96-101.

City of London Economic Development. (2010). Emerging markets- International capital raising trends. *Trusted Sources Research & Network*, 1-56.

Clayton M.J.et al. (2006). The presence and market-structure of exchanges around the world. *Journal of Financial Markets, 9*, 27–48.

Deb G. S. et al. (2007). Performance of Indian equity mutual funds vis a vis their style benchmarks: An empirical exploration. *Journal of applied Finance, ICFAI.*

Deb S. G. & Benerjee A. (2009). Downside risk analysis of Indian equity mutual funds: A value at risk approach. *International research Journal of finance and economics*, 23, 216-230.

Deb S. G. et al. (2007). Market timing and stock selection ability of mutual funds in India: An empirical investigation. *Vikalpa, 32*(2), 39-51.

Debashish S.S. (2009). Investigating performance of equity- based mutual fund scheme in Indian scenario. *KCA journal of business management, 2* (2), 1-15.

Debasish S.S. (2009). Investigating performance of Equity- based Mutual Fund Schemes in Indian Scenario. *KCA Journal of Business Management, 2*(2). 1-15

Detemple B. J. & Gottardi. (1996). Aggregation, efficiency and mutual fund separation in incomplete market. *Economic Theory, 11*, 443-455.

Dhanda S.K. et. al. (2012). Performance evaluation of selected open ended mutual funds in India. *International Journal of Marketing, Financial Services & Management Research, 1*(1), 29-38

Fama, E. F. (1972). Components of Investment Performance. *Journal of Finance, 27*, 551- 567.

Ferruz L. et al. (2007). Social Responsible Investment: Mutual Funds. Global and Local Trends. *The International Journal of applied Economics and Finance, 1*(2), 120-125.

Garcia J.V. (2013). The Persistence of European mutual fund performance. *Research in International Business and Finance, 28*, 45-67.

Gohar et al. (2011). Performance comparison of mutual funds in Pakistan. *African Journal of Business Management, 5*(14), 5583-5593.

Grinblatt M. & Titman S. (1989). Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings, *Journal of Business, 62*, 393-416.

Habib A. (2010). Portfolio performance evaluation: Investment corporation of Bangladesh. *Journal of economics and sustainable development, 1*(1), 1-11.

Henriksson, R. D, & Merton, R. C. (1981). On Market Timing and Investment performance. II. Statistical Procedures for Evaluating Forecasting Skills. *Journal of Business, 54*(4), 513-533.

Hooper K. et al. (2006). Persistence in Mutual Fund Returns: New Zealand evidence. *Accounting Research Journal, 19*(2), 105-121.

Hunter D. et al. (2013). Mutual fund performance evaluation with active peer benchmarks. *Journal of Financial Economics, 112*, 1-29.

Ippolito A. R. (1989). Efficiency with costly information: A study of mutual fund performance, 1965-1984. *Quarterly Journal of Finance, 104* (1), 1-23.

Jagric T. et al. (2007). Risk – adjusted performance of Mutual Funds: Some Tests. South- Eastern Europe. *Journal of Economics, 2*. 233-244.

Jensen, M. C. (1968). The performance of mutual funds in the period 1945-1964. *Journal of Finance, 23*(2), 389–416.

John K. C. and Kumar S. (2010). Indian Primary Market- A Review. *International Journal of Contemporary Business Studies, 1*(1), 6-15.

Kale R. J. & Panchapagesan V. (2012). Indian mutual fund industry: Opportunities and challenges. *IIMB Management Review, 24*, 245-258.

Kamble R. M. (2013). Mutual funds and SEBI regulations. *International Journal of Computational Engineering Research, 3*(5), 23-27, retrieved from http://www.ijceronline.com/papers/Vol3_issue5/Part.1/E0351023027.pdf

Kamble R. M. (2013). Mutual funds and SEBI regulations. *International Journal of Computational Engineering Research, 3*(5), 23-27, retrieved from http://www.ijceronline.com/papers/Vol3_issue5/Part.1/E0351023027.pdf

Karatepe Y. & Gokgoz F. (2006). Style analysis of Turkish mutual funds. *International Reserch Journal of Finance and Economics, 2*, 88-105.

Kaushik A. & Barnhart S. W. (2009). Do mutual funds with few holdings outperform the market? *Journal of Asset Management, 9*(6), 398-408.

Khurana A. & Panjwani K. (2010). Hybrid mutual funds: An analysis. *APJRBM, 1*(2),

Kumar L. N. & Devi R. V. (2011). Performance evaluation of private and public sponsored funds in India. *International Journal of Research in Commerce and Management, 1*(2), 24-35.

Kundu A. (2009). Stock selection performance of mutual fund managers in India: An empirical study. *Journal of Business and Economics Issues, 1*(1), 60-72.

Lai M. M. & Lau Siok H. (2010). Evaluating mutual fund performance in an emerging Asian economy: The Malaysian experience. *Journal of Asian economics, 21*, 378-390.

Lohana P. M. (2014). Growth of mutual funds in India. *Acme International journal of multidisciplinary research, 2*(4), 25-30.

Mahmud M. & Mirza N. (2011). An evaluation of mutual fund performance in an economy: The case of Pakistan. *The Lahore journal of economics, 16*, 301-316.

Mishra B. & Rahman M. (2002), Measuring mutual fund performance using lower partial moment, *Global Business Trends*, Contemporary Readings. pp. 1-17

Mishra et al. (2010) Performance of Indian capital Market- An empirical analysis. *European Journal of Economics and Administration Sciences*, (23), 49-57.

Mishra P. K. and Pradhan B. B. (2009). Capital Market efficiency and Financial Innovation – A Perspective Analysis. *The Research Network*, *4*(1), 1 -5.

Mishra, P. K. (2009). Indian Capital Market - Revisiting Market Efficiency. *Indian Journal of Capital Markets, 2*(4), 30-34.

Narayanasamy R. & Rathnamani V. (2013). Performance Evaluation of equity mutual funds (on selected equity large cap funds). *International Journal of Business and Management Invention, 2*(4), 18-24

Nayak J. K. (2006). Analysis of Indian capital market: Pre and Post Liberalization. Vilakshan, XIMB Journal of Management, 3(2), 139-178.

Nazir S. M. & Nawaj M. M. (2010). The determinants of mutual fund growth in Pakistan. *International Research Journal of Finance and Economics, 54*, 75-84.

Nimalathasan B. & Gandhi R. K. (2012). Mutual fund financial performance analysis-A comparative study on equity scheme and equity mid cap schemes. *EXCEL International Journal of Multidisciplinary Management Studies, 2*(3), 91-106.

Noulas G. Athanasios et al. (2005). Performance of mutual funds. *Managerial Finance. 31*(2), 101-112.

Pai T. A. (2007). Comparative Analysis of Indian Stock Market with International Market. Great Lakes Herald, *1*(1), 39-71.

Prajapati K. P. & Patel M. K. (2012). Comparative study on performance evaluation of mutual fund scheme of Indian companies. *Journal of Arts, Science & commerce, 3*(3), 47-59

Prince V. & Bacon L. (2010). Analyzing mutual fund performance against establish performance benchmarks: A test of market efficiency. *Research in Business and Economics Journal, 1,* 1-15.

Priyadarshini E. & Babu C. (2012). A comparative analysis for forecasting the NAV's of Indian mutual fund using Multiple Regression Analysis and artificial Neural Networks. *International Journal of Trade, Economics and Finance, 3*(5), 347-350.

Rahman A.B.M. & Barua S. (2012). Mutual fund performance: An analysis of monthly return of an emerging market. *Research Journal of Finance and Accounting, 3*(4), 34-46.

Rajesh A. (2010). Security Speed of Adjustment and Market Quality: A Case of National Stock Exchange of India. *The IUP Journal of Applied Finance, 16*(6), 54-64.

Ramesh B. & Dhume P. S. (2014). Market timing ability of fund managers – Indian Experience, *The Indian Journal of Commerce, 67* (1), 1-15

Ramesh B. et al (2014). Market timing ability of Fund managers- Indian Experience. Indian *Journal of Commerce, 67*(1), 2-16

Reddy S. R. et al. (2011). An empirical study on the pre and post- purchase informational needs of mutual fund investor. *Global journal of finance and management, 3*(1), 57-68.

Redman A. & Gullett N. S. (2007). Impact of fund, management and market charactistics on bond mutual fund performance. *Journal of Asset Management, 7*(6), 429-442.

Renneboog L.D.R. et al. (2007). The price of the ethics: Evidence from socially responsible mutual funds. *Centre discussion paper, Tilburg University, 29*, 1-47.

Roy S. (2014). The conditional performance of Indian mutual fund managers: A new look. *Amity Business Review, 15*(1), 142-167

Saez J.C. (2009). Non- simultaneously Market Timing in Mutual funds. *Journal of Applied Science, 9*(9), 1776-1780.

Sarish & Ajay J. (2012). Analysis regarding Mutual funds awareness and opinion. *VSRD International Journal of business & Management research, 2*(1), 1-7.

Satyasekhar G.V. (2011). An appraisal of modeling dimension for performance appraisal of global mutual funds. *International Journal of Research in Commerce and management, 2*(1), 71-80.

Sharma P. et al. (2007). Deepening India's Capital Market: The way Forward. *USAID Financial Institutions Reforms and Expansion- Regulatory (FIRE-R).* 1-69

Sharpe, W.F. (1966). Mutual Fund Performance. *Journal of Business, 39,* 119-138.

Sheikh M. J. & Noreen U. (2012). Validity of efficient market hypothesis: Evidence from UK mutual funds. *African Journal of Business Management, 6*(2), 514-520.

Shojai S. & Preece R. (2001). The future of U.S. Asset Management industry. *Journal of Finance Transformation, 1,* 72-79.

Shojai S. et al. (2001). The London Asset Management market. *Journal of finance transformation, 2,* 93-105.

Shojai S. et al. (2010). Economic Hubris- The case study of Equity Asset Management. *Journal of financial transformation, 29,* 9-16.

Shukla R. & Singh S. (1997). Performance evaluation of global equity mutual funds: Evidence from 1988-95. *Global Financial Journal, 8*(2), 279-293.

Skrinjaric T. (2013). Market timing ability of mutual funds with tests applied on several Croatian funds. *Croatian Operational Research Review, 4,* 176-186

Sondhi H. J. & Jain P. K. (2006). Are equity investments well- timed? A study of timing parameters of equity mutual funds in India. *Journal of advances in management research, 3*(1), 17-25.

Soongswang A. & Sanohdontree Y. (2011). Equity Mutual Fund: Performance, Persistence and Fund Rankings. *Journal of Knowledge Management, Economics and Information Technology, 6,* 1-27.

Soongswang A. & Sanohdontree Y. (2011). Open ended equity mutual funds, *International Journal of Business and Social Science, 2*(1), 127-136.

Sorros N. J. (2003). Return and Risk analysis: A case study in equity mutual fund operating in the Greek financial market. *Managerial Finance, 29*(9), 21-28.

Stulz. (2009). Securities Laws, Disclosure and Capital Markets in the Age of Financial Globalisation. *Journal of Accounting Research,* 47(2), 349–90.

Treynor J. & Mazuy K. (1966). Can mutual funds outguess the market? *Harvard Business Review, 44,* 131–136.

Treynor J. L. (1965). How to rate management of investment funds? *Harvard Business Review. 43*(1), 63-75.

Tripathi N. P. (2005). An empirical evaluation of market timing abilities of Indian fund managers on equity linked saving scheme. *Delhi Business Review, 6*(2), 20-27.

Tripathi N. P. (2006). Market timing abilities and mutual fund performance- an empirical investigation into equity linked saving schemes. *Vilakshan, XIMB Journal of Management,* 127-138.

Urakabe A. (2010). Growth of Asset Management business in Asia. *Lakyana (special edition) Nomura Research Institute Ltd, 85*

Vasantha S. V. et al. (2013). Evaluating the performance of some selected open ended equity diversified mutual fund in Indian mutual fund industry. *International Journal of Innovative Research in Science, Engineering and Technology, 2*(9), 4735-4744.

Vasudev P. M. (2007). Capital Market and Corporate Governance in India: An overview of recent trends. The Corporate Governance Law Review, 3(3), 255-282.

Walter I. & Sisli E. (2007). The Asset Management Industry in Asia: Dynamics and growth, structure and performance. *Financial markets, institutions and instruments, 6* (1).

Walter I. (1999). The global asset management industry: Competitive, Structure and Performance. *Financial Markets, Institutions and Instruments, 8*(1), 1-78.

Wermers R. (2000). Mutual fund performance: An empirical decomposition into stock-picking talent, style, transaction costs and expenses. *The Journal of finance, 4*(4), 1655-1695.

Zabiulla. (2013). Portfolio strategies of fund managers in Indian capital market. *IIMB Management Review, 26,* 28-58.

THESES

Alam N. (2011). *FII's role in the promotion of Indian capital market.* (Doctoral Thesis). Aligarh Muslim University, Aligarh, India.

Alizadeh A. G. (2012). *Role of stock exchanges in the promotion of capital market. A comparative study of India and Iran.* (Doctoral Thesis). Aligarh Muslim University, Aligarh, India.

Sumalatha B.S. (2007). State of competition among the mutual funds in India: An explanatory analysis. (Unpublished Dissertation submitted for M. Phil.), *Jawaharlal Nehru University.* India.

Duda K. (2009). Performance and risk evaluation of Danish mutual and hedge funds. (Unpublished Doctoral thesis). *University of Aarhus,* Denmark.

Eleonora G. (2012). Performance of mutual funds in European countries. (Unpublished Dissertation) *University of Piraeus,* Greece.

Garg M. (2014). A study of performance evaluation of selected mutual funds in India (Unpublished Doctoral Thesis), *Maharishi Markandeswar University,* India.

Somya G. D. (2008). Performance Evaluation of Equity mutual funds in India; An empirical exploration, (Unpublished Doctoral Thesis). *IIM Calcutta.* India.

Herfindahl O. C. (1950). Concentration in the US Steel Industry. (Unpublished Doctoral Thesis), *Columbia University,* U.S.A.

Irissappane A. (2000). Paradigm shift in the performance of Indian mutual funds: An analysis with reference to close ended funds of selected institutions, (Unpublished Doctoral Thesis). *Pondicherry University,* India.

Sindhu K. (2007). *Stock market behaviour and economic growth in India.* (Doctoral Thesis). Mahatma Gandhi University, Calicut, India.

Karlsson T. (2005). Mutual fund performance: Explaining the performance of Swedish domestic equity mutual funds by using different fund charactistics, (Doctoral Thesis). *School of Economics and Commercial Law. Goteborg University.*

Lakshmi N. (2007). Performance of the Indian mutual fund industry: A study with special reference to growth scheme, (Unpublished Doctoral Thesis). *Pondicherry University,* India.

Muffee V. M. (2012). *The role of securities and exchange board of India (SEBI) in regulating the Indian capital market: A case study of Ludhiana stock exchange.* (Doctoral Thesis). Punjab Technical University, Meghalaya, India.

Park H. M. (2009). Comparing Group Means: T-tests and One way ANOVA using Stata. SAS, R and SPSS. (Unpublished Doctoral Thesis), *Indiana University,* Indiana, Retrieved from http://rt.uits.iu.edu/visualization/analytics/docs/hlm-docs/ttest.pdf

Parmar T. C. (2010). An empirical investigation on performance of mutual fund industry in India, (Unpublished Doctoral Thesis). *Saurashtra University,* Rajkot.

Pattanaik B. & Arvind M. S. (2009). Asset under management for various kinds of funds, (Unpublished Doctoral Thesis). *SP Jain Centre of management,* Singapore.

Shah D. (2012). *Management of Corporate Governance practices in a dynamic capital market.* (Doctoral Thesis). Gujarat University, Gujarat, India.

Sheokand A. (n.d.). *Performance of initial public offering (IPO's) in Indian capital market.* (Doctoral Thesis). Maharishi Dayanand University, Rohtak, India.

Somashekar T. S. (2008). Performance and regulation of mutual funds in India: An economic analysis, (Unpublished Doctoral Thesis). *Institute of Social and Economic Change,*, India.

Suppa-Aim T. (2010). Mutual Fund performance in emerging markets: The case of Thailand. (Unpublished Doctoral thesis), *University of Birmingham,* U.K.

Thushara G. (2007). *Impact of foreign portfolio investment on Indian Capital markets.* (Doctoral Thesis). University of Calicut, Calicut, India.

Villadsen M. (2011). Performance Evaluation of 60 Danish mutual funds. (Unpublished doctoral thesis), *Aarhus University,* Denmark.

WORKING PAPERS AND PAPERS IN CONFERENCE PROCEEDINGS

Agarwal and Singh. (2002). Merger Announcements and Insider trading Activity in India: An empirical Investigation. *NSE research Initiatives,* Paper No.8.

Anand S. & Murugaiah. (2006). Analysis of components of investment performance-An empirical study of mutual funds in India. 10th Capital Market Conference, Indian Institute of Capital Markets, *Social Science Research Network (SSRN), Retrieved from http://ssrn.com/abstract=961999*

Baks P. K. (2003). On the performance of mutual fund managers. Working paper, *Emory Universitty,* Atlanta.

Christensen M. (2005). Danish Mutual Fund Performance: Selectivity, Market Timing and Persistence, *Finance Research Group, Aarhus School of Business,* Working Paper No. F-2005-1.

Fung Ben et al. (2004). Public asset management companies in East Asia- Case studies. *Asia Financial Stability Institute, Occasional paper no. 3.*

Hagiwara A.T. & Pasdilla G. (2004). Experience of Asian asset management companies: Do they increase moral hazard? Evidence from Thailand. *Asian Development Bank publication, Economic Working Paper No.55.*

Obstfeld M. & Taylor A. M. (2003). Globalization and Capital Markets. National Bureau of Economic Research, Working paper no. w8846, 121-187.

Panwar S. & Madhumathi R. M. (2006). Characteristics and performance evaluation of selected mutual funds in India. Institute of capital Market 9th Capital market Conference paper, *Social science Research network (SSRN),* Retrieved from http://ssrn.com/abstract=876402

Raju M. T. and Ghosh, A. (2004). Stock Market Volatility - An International Comparison. *WPS No.8, SEBI.*

Walter, I. (1998). The Global Asset Management Industry: Competitive Structure, Conduct and Performance. *NYU Working Paper No. FIN-98-072*, 2-110 retrieved from http://ssrn.com/abstract=1298274

INTERNET SOURCES

Association of Mutual Funds in India. (2014). Statement of Additional Information (SAI), IL&FS Infra Asset Management Limited, 3-35, retrieved from http://portal.amfiindia.com/spages/sai65.pdf

Association of Mutual Funds in India. (n.d.). Mutual Fund history, retrieved from http://www.amfiindia.com/research-information/mf-history

Bhuveneswari P. & Selvem M. (2011). Market timing ability of Indian mutual fund managers under conditional model. *Social science research network,* Retrieved from http://ssrn.com/abstract=1910764 orhttp://dx.doi.org/10.2139/ssrn.1910764

Bollen N. P. B., & Busse J. A. (2001). On the timing ability of mutual fund managers. *The Journal of Finance, 56*(3),1075-1094 retrieved from http://onlinelibrary.wiley.com/doi/10.1111/0022-1082.00356/pdf

Bose S. (2012). Some aspects of Indian Mutual Funds' performance during the Recent Financial Crisis. Money & Finance, ICRA Bulletin, 75-112, retrieved from http://www.icra.in/Files/MoneyFinance/3.%20Suchismita %20Bose.pdf.

Brown K C. et al. (2011). Investment style volatility and mutual fund performance. Retrieved from http://www2.mccombs.utexas.edu/faculty/keith.brown/Research/stylevolatility-wp.pdf (re draft on April , 30, 2012).

Chakrabarti R. (n.d.). The Asset Management Industry in India. 1-47, retrieved from http://ssrn.com/author=256160

Cho Je Yoon. (n.d.). Indian Capital Market: Recent developments and policy issues. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?rep=rep1&type=pdf&doi=10.1.1.194.4505.

Choudhary V. & Chawla P. S. (2014). Selectivity and market Timing ability of the fund managers in India: An analysis of selected equity mutual funds. *IOSR Journal of Economics and Finance, 1*, 75-83, retrieved from http://www.iosrjournals.org/iosr-jef/papers/icsc/volume-1/9.pdf.

Christensen H.B. et al (2011), Capital Market Effects of Securities Regulation: The Role of Prior Regulation, Implementation and Enforcement. *NBER Working Paper 16737*, retrieved from <http://www.nber.org/public_html/confer/2011/CFf11/Christensen_Hail_Leuz.pdf>, accessed 20 February 2012.

COB Asset Management division. (2001). Asset management in France. 1-5 Retrieved from http://www.amf-france.org/technique/multimedia?docId=workspace://SpacesStore/be831da0-9567-4acc-b109-5a34c65ac8a7_en_1.0_rendition.

Confederation of Indian Industry. (2010). Indian Mutual Fund Industry- Towards 2015. CII 6th Mutual Fund Summit 2010, 1-26. Retrieved from https://www.pwc.in/assets/pdfs/financial-service/Towards_2015.pdf

Deloitte Center for Finacial Services. (2012). Growth opportunities for financial Services in India: Investing for the long term in the world's largest democracy, 1-16, retrieved from https://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/FSI/US_FSI_GrowthOpportunutiesforFinancialServicesIndia_100412.pdf

Ernst & Young. (2012). Asset management opportunities in new realities. 1-16, retrieved from http://www.rolandberger.com/media/publications/2012-09-11-rbsc-pub-Asset_management_opportunities.html

European Fund Asset Management Association. (2009). Asset management in Europe: facts and Figures, Retrieved from http://www.efama.org/index2.php?option=com_docman&task=doc_view&gid=967&Itemid=35, accessed on April 11, 2012.

Ferreira M. A. & Ramos S.A. (2009). Mutual fund industry competition and concentration: International Evidence, Unpublished paper, Universidade Nova de Lisboa, Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1343096&download=yes

Finance Maps of World. (n.d.). Asset Management, retrieved from rhttp://finance.mapsofworld.com/asset-management/

French Asset Management Association. (2012), *The French Asset management market in 2010*, Retrieved from http://www.afg.asso.fr/index.php?option=com_content&view=article&id=3829&Itemid=310&lang=en&showall=1, accessed in April 12, 2012.

Global Investor. (2008). Positioning in India's asset management industry, retrieved from http://www.globalinvestormagazine.com/Article/2227078/Positioning-in-Indias-asset-management-industry.html.

KPMG & ICC. (2014). Indian Mutual fund industry- Distribution continuum: Key to success, 1-18, retrieved from https://www.kpmg.com/IN/en/IssuesAndInsights/ArticlesPublications/Documents/Indian-Mutual-Fund-Industry.pdf

Munro J. & Liu B. (2009). State of the Investment Management Industry in Asia Pacific, *KPMG International report*, Retrieved from https://www.kpmg.com/CN/en/.../Documents/inv-mgt-aspac-O-0804.pdf

Nomura Research Institute Ltd. (2010). Growth of the asset management business in Asia. *Lakyara, Special Ed., 85,* 1-12, retrieved from http://www.nri.com/global/opinion/lakyara/2010/pdf/lkr201085.pdf

NSE. (2013). *Indian Security Market- A Review- 2013*.41-66. Retrieved from http://www.nse-india.com/research/dynaContent/ismr.htm.

NSE. (2014). Historical Index data. Retrieved from http://www.nseindia.com/products/content/equities/indices/historical_index_data.htm

NSE. (n.d.). National Stock Exchange of India Ltd: Leadership through change, Retrieved from http://www.nse-india.com/content/press/leadership.pdf

Rao D. N. (2006). Investment styles and performance of equity mutual funds in India. *Social Science Research Network (SSRN)*, retrieved from http://ssrn.com/abstract=922595

Rhoades S. A. (1993). The Herfindahl- Hirschman Index, 188-189 Retrieved from http://fraser.stlouisfed.org/docs/publications/FRB/pages/1990-1994/33101_1990-1994.pdf

SEBI. (n.d.). Securities and Exchange Board of India: SEVI Investor education program. Retrieved from http://www.sebi.gov.in/faq/mf_faq.html

Smith D. (2008). Asian Asset Management companies in retrospect. *Asia Focus, Country Analysis*, Unit of Federal Bank of San Francisco. Retrieved from http://ideas.repec.org/a/fip/fedfaf/y2008isepx1.html

Sridhar D. & Chadrashekhara G. (2010). Indian asset management Industry. On Quest, Consultancy Club of IIM Shillong, 2-23, retrieved from http://www.iimsconquest.in/oldwebsite/shownews.php?subaction=showcomments&id=1283167860&archive=&start_from=&ucat=2,3&month=2&year=2015

Stuart S. (2009). Asset management in India: A round table discussion, 1-20, retrieved from https://www.spencerstuart.com/~/media/PDF%20Files/Research%20and%20Insight%20PDFs/Asset-Management-in-India_28May2009.pdf

U.S. Department of Justice and the Federal Trade Commission. (2010) *Horizontal Merger Guidelines.* 1-34, Retrieved from http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf

Walter I. & Sisli E. (2006). The Asset Management Industry in Asia: Dynamics of Growth, Structure and Performance. 4-85, retrieved from http://ssrn.com/abstract=929162.

Wikipedia. (n.d.). Securities and Exchange Board of India, retrieved from http://en.wikipedia.org/wiki/Securities_and_Exchange_Board_of_India

FACTSHEET, REPORT AND RESEARCH PROJECT

Association of Mutual Funds in India. (2014). AMFI monthly report, retrieved from http://www.amfiindia.com/research-information/amfi-monthly. (March 2000 to March 2014).

Association of Mutual Funds in India. (2014). AMFI monthly report March 2014, retrieved from http://portal.amfiindia.com/spages/ammar2014repo.pdf

Chinchane N.B. (2008). Comparative analysis of mutual fund on the basis of alpha, beta and standard deviation. (Project Report). *St. Mira Viswakarma Institute of Management, Pune.*

Dhar J. (2005). Investment performance of mutual funds: Evidence of market timing and selectivity from India 1997-2003. *UGC sponsored minor research project*, 1-28

Fact Book. (2012). The Incredible Investment Destination. *Department of Economic Affairs, Ministry of Finance Government of India.*

ICI Factsheet. (2014). A Review of Trends and Activities in the U.S. Investment Company Industry (54th Edition). Investment Company Institute. Retrieved from http://www.ici.org/pdf/2014_factbook.pdf

IIFA-Industry Statistic. (2014). Worldwide Mutual Fund Asset and Flows- Fourth Quarter 2013. International Investment Funds Association. Retrieved from http://www.iifa.ca/documents/1401461698_International%20Investment%20Funds%20Statistics%20Q4%202013.pdf

India Financial Institute Practice. (n.d.). Indian Asset Management: Achieving broad-based Growth. 1-6.

Investment Company Institute. (2013). Investment Company Fact Book: A Review of Trends in the U.S. Investment Company Industry, 1-252, retrieved from http://www.icifactbook.org/pdf/2013_factbook.pdf

NSE Report. (2001). Indian security Market- A Review. Vol. IV 2001, India.

NSE Report. (2002). Indian security Market- A Review. Vol. V, 2002, India.

NSE Report. (2003). Indian security Market- A Review. Vol. VI, 2003 India.

NSE Report. (2004). Indian security Market- A Review. Vol. VII 2004, India.

NSE Report. (2005). Indian security Market- A Review. Vol. VIII 2005, India.

NSE Report. (2006). Indian security Market- A Review. Vol. IX 2006, India.

NSE Report. (2007). Indian security Market- A Review. Vol. X 2007, India.

NSE Report. (2008). Indian security Market- A Review. Vol. XI, 2008 India.

NSE Report. (2009). Indian security Market- A Review. Vol. XII 2009, India.

NSE Report. (2010). Indian security Market- A Review. Vol. XIII 2010, India.

NSE Report. (2011). Indian security Market- A Review. Vol. XIV 2011, India.

NSE Report. (2012). Indian security Market- A Review. Vol. XV 2012, India.

NSE Report. (2013). Indian security Market- A Review. Vol. XVI 2013. India.

NSE Report. (2014). Indian security Market- A Review. Vol. XVII 2014. India.

Planning Commission. (2014), Data Book for DCH. Retrieved from http://planningcommission.gov.in/data/datatable/1203/table_3.pdf

Saxton J. (2002). The mutual fund industry: An overview and analysis. *Joint Economic Committee Report. USA.*

Sen P. et al. (2003). Developing the Indian Debt Capital Markets: Small Investor Perspectives. *Perspective Planning Division, Planning Commission, Govt of India.* 1-30.

Subrahmanyam N. (2009). Mutual funds and banking: India and global experience. (Report) *Indian Institute of Banking & Finance.* Retrieved from http://www.iibf.org.in/documents/reseach-report/Report-17.pdf

U.S. Commercial Service India. (n.d.). Pension and Asset Management in India. Banking, Finance and Insurance in India.

UNCTAD. (*2008*). Trade and Development Report, 2008. Commodity prices, financial flows and financing of investment. *United Nations publications*, Sales No. E.08.II.D.21.

JOURNALS

- Business India
- Business Outlook
- Business Today
- Chartered Financial Analyst
- Chartered Secretary
- Economic & Political Weekly
- Gitam Journal of Management
- Indian Journal of Commerce
- Indian Journal of Finance
- The Business Week
- The Management Accountant

NEWSPAPERS

- Business Line
- The Business Standard
- The Economics Times
- The Financial Express

Appendix – I Profile of Sample Mutual Fund Schemes

(Net Assets in Rs. in Crores)

Mutual Fund Scheme	Launch	Net Assets	Asset Management Company	Type of AMC	Investment Objective
Baroda Pioneer Equity Linked Saving Scheme 96	Mar-96	27.3	Baroda Pioneer Asset Management Company Ltd	Bank Sponsored	Growth
Birla Sun Life 95 – Growth	Feb-95	646.5	Birla Sun Life Asset Management Company Ltd	Private	Hybrid
Birla Sun Life Advantage Fund - Growth	Feb-95	286.3	Birla Sun Life Asset Management Company Ltd	Private	Growth
Birla Sun Life Buy India Fund - Growth	Jan-00	33.8	Birla Sun Life Asset Management Company Ltd	Private	Growth
Birla Sun Life Gilt Plus Liquid Plan - Growth	Oct-99	26.1	Birla Sun Life Asset Management Company Ltd	Private	Income
Birla Sun Life Gilt Plus P F Plan - Growth	Oct-99	32.4	Birla Sun Life Asset Management Company Ltd	Private	Income
Birla Sun Life Income Plus - Growth	Oct-95	5129.1	Birla Sun Life Asset Management Company Ltd	Private	Income
Birla Sun Life India Opportunities Fund - Growth	Dec-99	39.4	Birla Sun Life Asset Management Company Ltd	Private	Growth
Birla Sun Life MNC Fund - Growth	Dec-99	443.9	Birla Sun Life Asset Management Company Ltd	Private	Growth
Birla Sun Life Monthly Income Plan - Growth	Nov-00	115.1	Birla Sun Life Asset Management Company Ltd	Private	Hybrid
Birla Sun Life New Millennium - Growth	Jan-00	68.5	Birla Sun Life Asset Management Company Ltd	Private	Growth
Canara Robeco Gilt PGS- Growth	Dec-99	18.8	Canara Robeco Asset Management Company Ltd	Bank Sponsored	Income
Canara Robeco Monthly Income Plan -	Apr-88	207.3	Canara Robeco Asset Management	Bank	Hybrid

Growth			Company Ltd	Sponsored	
DSP BlackRock Balanced Fund - Growth	May-99	482.3	DSP BlackRock Investment Managers Ltd.	Private	Hybrid
DSP BlackRock Bond Fund - Retail Plan - Growth	Apr-97	292.1	DSP BlackRock Investment Managers Ltd.	Private	Income
Escorts Income Plan – Growth	Mar-98	28.1	Escorts Asset Management Company Ltd	Private	Income
Franklin India Bluechip – Growth	Nov-93	4787.8	Franklin Templeton Asset Management India Private Ltd	Private	Growth
Franklin India Opportunity Fund - Growth	Feb-00	274.3	Franklin Templeton Asset Management India Private Ltd	Private	Growth
Franklin India Prima Plus - Growth	Sep-94	2014.4	Franklin Templeton Asset Management India Private Ltd	Private	Growth
Franklin Infotech Fund – Growth	Aug-98	157.1	Franklin Templeton Asset Management India Private Ltd	Private	Growth
Franklin Templeton India Balanced Fund - Growth	Dec-99	215.2	Franklin Templeton Asset Management India Private Ltd	Private	Hybrid
Templeton India Pension Plan - Growth	Mar-97	246.7	Franklin Templeton Asset Management India Private Ltd	Private	Hybrid
HDFC Equity Fund – Growth	Dec-99	10444.9	HDFC Asset Management Company Limited	Private	Growth
HDFC High Interest Fund- Dynamic Plan – Growth	Apr-97	867.5	HDFC Asset Management Company Limited	Private	Income
HDFC Prudence Fund – Growth	Jan-94	5146	HDFC Asset Management Company Limited	Private	Hybrid
HDFC Taxsaver – Growth	Mar-96	3505.3	HDFC Asset Management Company Limited	Private	Growth
HDFC Top 200 – Growth	Sep-96	10319.7	HDFC Asset Management Company Limited	Private	Growth
ICICI Prudential Balanced - Growth	Oct-99	640.1	HDFC Asset Management Company Limited	Private	Hybrid

APPENDICES

ICICI Prudential FMCG - Growth	Mar-99	217.4	HDFC Asset Management Company Limited	Private	Growth
ICICI Prudential Technology Fund - Growth	Jan-00	213.7	ICICI Prudential Asset Mgmt.Company Limited	Private	Growth
ICICI Prudential Top 100 Fund - Cumulative	Jun-98	468.5	ICICI Prudential Asset Mgmt.Company Limited	Private	Growth
ICICI Prudential Top 200 Fund - Growth	Sep-94	446.2	ICICI Prudential Asset Mgmt.Company Limited	Private	Growth
ING Core Equity Fund – Growth	May-99	57/7	ING Investment Management (India) Pvt. Ltd.	Private	Growth
ING Income Fund - Regular Plan - Growth	May-99	11.7	ING Investment Management (India) Pvt. Ltd.	Private	Income
JM Balanced – Growth	Dec-94	6.5	JM Financial Asset Management Private Limited	Private	Hybrid
JM Equity – Growth	Dec-94	31.7	JM Financial Asset Management Private Limited	Private	Growth
Kotak 50 – Growth	Dec-98	627.4	Kotak Mahindra Asset Management Company Limited(KMAMCL)	Private	Growth
Kotak Balance – Growth	Nov-99	341.3	Kotak Mahindra Asset Management Company Limited(KMAMCL)	Private	Hybrid
Kotak Bond Deposit – Growth	Nov-99	150.82	Kotak Mahindra Asset Management Company Limited(KMAMCL)	Private	Income
L & T Triple Ace - Regular - Growth	Mar-97	1326.5	L&T Investment Management Limited	Private	Income
L & T Ultra Short Term Fund - Regular - Growth	Nov-97	795.57	L&T Investment Management Limited	Private	Income
LIC Nomura Bond Fund – Growth	May-99	140.5	LIC NOMURA Mutual Fund Asset Management Company Limited	Institution	Income
LIC Nomura Equity Fund	Feb-93	288.7	LIC NOMURA Mutual Fund Asset Management Company Limited	Institution	Growth

LIC Nomura MF Growth Fund – Growth	Aug-94	67.2	LIC NOMURA Mutual Fund Asset Management Company Limited	Institution	Growth
LIC Nomura Tax Plan	Mar-97	28.7	LIC NOMURA Mutual Fund Asset Management Company Limited	Institution	Growth
PRINCIPAL Balanced Fund – Growth	Dec-99	16	Principal PNB Asset Management Co. Pvt. Ltd.	Private	Hybrid
PRINCIPAL Index Fund – Growth	Jun-99	8.4	Principal PNB Asset Management Co. Pvt. Ltd.	Private	Growth
Reliance Growth – Growth	Oct-95	4105.7	Reliance Capital Asset Management Ltd	Private	Growth
Reliance Vision – Growth	Oct-95	2411.5	Reliance Capital Asset Management Ltd	Private	Growth
SBI Magnum Balanced Fund – Growth	Oct-95	488.2	SBI Funds Management Private Limited	Bank Sponsored	Hybrid
SBI Magnum Equity Fund – Growth	Nov-90	1048.7	SBI Funds Management Private Limited	Bank Sponsored	Growth
SBI Magnum Multiplier Plus 93 – Growth	Feb-93	1055.4	SBI Funds Management Private Limited	Bank Sponsored	Growth
SBI Magnum Tax Gain Scheme 93 - Growth	Mar-93	4141.6	SBI Funds Management Private Limited	Bank Sponsored	Growth
Sundaram Growth Fund – Growth	Mar-97	170.6	Sundaram Asset Management Company Limited	Private	Growth
Tata Balanced Fund – Growth	Oct-95	616.2	Tata Asset Management Limited	Private	Hybrid
Tata Ethical Fund - Appreciation (Formerly Select Equity Fund)	May-96	130.7	Tata Asset Management Limited	Private	Growth
Tata Pure Equity Fund – Growth	May-98	616.1	Tata Asset Management Limited	Private	Growth
Tata Tax Saving Fund	Mar-96	128.1	Tata Asset Management Limited	Private	Growth
Tata Young Citizens Fund	Oct-95	173.7	Tata Asset Management Limited	Private	Hybrid
Taurus Bonanza Exclusive Growth Scheme 95	Feb-95	19.8	Taurus Asset Management Company Limited	Private	Growth

Taurus Discovery Fund – Growth	Sep-94	21	Taurus Asset Management Company Limited	Private	Growth
Taurus Starshare Fund – Growth	Jan-94	150.3	Taurus Asset Management Company Limited	Private	Growth

Source: Various AMFI Reports.

Appendix – II Result of Treynor & Mazuy Model

Scheme No.	α	p (α)	β	S. E. (β)	p (β)	γ	S. E. (γ)	p (γ)	R^2
1	0.000	0.182	-0.460	0.019	0.014	-0.282	0.237	0.389	0.002
2	0.000	0.940	0.075	0.012	0.000	-0.496	0.239	0.038	0.012
3	0.000	0.801	0.018	0.017	0.287	-0.667	0.340	0.050	0.002
4	0.000	0.208	0.067	0.014	0.000	-0.481	0.264	0.069	0.008
5	0.000	0.000	0.025	0.001	0.921	0.025	0.018	0.154	0.001
6	0.000	0.000	-0.005	0.004	0.223	0.021	0.076	0.788	0.000
7	0.000	0.000	0.000	0.003	0.988	0.158	0.054	0.003	0.003
8	0.000	0.568	0.031	0.018	0.090	-0.591	0.364	0.104	0.002
9	0.000	0.617	0.015	0.013	0.257	-0.705	0.335	0.035	0.002
10	0.000	0.000	0.011	0.003	0.000	0.063	0.055	0.249	0.005
11	0.000	0.689	0.192	0.019	0.000	0.021	0.316	0.946	0.029
12	0.000	0.000	-0.001	0.003	0.787	-0.032	0.069	0.641	0.000
13	0.000	0.000	0.000	0.003	0.887	-0.010	0.069	0.879	0.000
14	0.000	0.315	0.014	0.011	0.192	0.102	0.216	0.638	0.001
15	0.000	0.000	0.000	0.002	0.979	0.061	0.037	0.101	0.001
16	0.000	0.834	-0.006	0.027	0.834	-0.111	0.547	0.840	0.000
17	0.000	0.548	0.083	0.016	0.000	-0.402	0.316	0.204	0.009
18	0.000	0.680	0.090	0.018	0.000	-0.120	0.366	0.744	0.007
19	0.000	0.674	0.079	0.015	0.000	-0.225	0.304	0.460	0.009

20	0.000	0.987	0.125	0.014	0.000	-0.437	0.200	0.029	0.025
21	0.000	0.930	0.079	0.011	0.000	-0.613	0.222	0.006	0.017
22	0.000	0.067	0.020	0.007	0.002	-0.147	0.135	0.278	0.003
23	0.000	0.611	0.044	0.016	0.006	0.059	0.324	0.855	0.002
24	0.000	0.000	0.001	0.002	0.750	0.162	0.045	0.000	0.004
25	0.000	0.499	0.014	0.011	0.189	-0.181	0.206	0.380	0.001
26	0.000	0.669	0.048	0.018	0.006	0.497	0.359	0.166	0.003
27	0.000	0.847	0.092	0.016	0.000	0.273	0.303	0.368	0.010
28	0.000	0.500	0.016	0.013	0.220	-0.140	0.245	0.567	0.001
29	0.000	0.625	0.004	0.014	0.782	-0.297	0.368	0.420	0.000
30	0.000	0.537	0.031	0.013	0.015	-0.697	0.178	0.000	0.007
31	0.022	0.331	-0.917	1.354	0.498	-2.904	24.046	0.904	0.000
32	0.000	0.983	0.034	0.017	0.049	-0.138	0.343	0.687	0.001
33	0.000	0.552	0.043	0.021	0.043	-0.679	0.424	0.109	0.002
34	0.000	0.000	0.004	0.002	0.118	-0.016	0.050	0.754	0.001
35	-0.001	0.041	-0.009	0.016	0.550	0.231	0.317	0.467	0.000
36	0.000	0.527	0.025	0.018	0.166	-0.488	0.357	0.172	0.001
37	0.000	0.957	0.061	0.016	0.000	-0.507	0.304	0.095	0.005
38	0.000	0.070	0.004	0.014	0.789	-0.576	0.259	0.026	0.001
39	0.000	0.000	0.000	0.002	0.877	-0.042	0.048	0.377	0.000
40	0.000	0.000	0.000	0.002	0.877	-0.042	0.048	0.377	0.000
41	-0.001	0.000	0.012	0.008	0.146	-0.038	0.162	0.814	0.001
42	0.000	0.000	-0.002	0.005	0.734	-0.130	0.104	0.209	0.000
43	0.000	0.286	-0.007	0.018	0.711	0.219	0.353	0.535	0.000
44	0.000	0.500	0.050	0.018	0.005	-0.217	0.351	0.535	0.002
45	0.000	0.336	0.018	0.017	0.279	-0.444	0.339	0.190	0.001

46	0.000	0.175	0.021	0.012	0.085	-0.010	0.243	0.967	0.001
47	0.000	0.462	-0.005	0.017	0.787	0.052	0.300	0.863	0.000
48	0.023	0.312	-0.841	1.326	0.526	-6.681	27.081	0.805	0.000
49	0.000	0.359	-0.004	0.015	0.772	-0.516	0.309	0.095	0.001
50	0.000	0.186	0.003	0.014	0.813	-0.203	0.272	0.455	0.000
51	0.000	0.138	0.016	0.018	0.397	0.312	0.326	0.339	0.000
52	0.000	0.856	0.045	0.018	0.012	-0.788	0.364	0.030	0.004
53	0.000	0.541	0.009	0.020	0.634	-0.755	0.398	0.058	0.001
54	0.000	0.882	0.075	0.017	0.000	-0.348	0.334	0.298	0.007
55	0.000	0.930	0.020	0.013	0.120	-0.545	0.256	0.033	0.002
56	0.000	0.603	0.013	0.019	0.469	-0.292	0.373	0.433	0.000
57	0.000	0.597	0.085	0.017	0.000	-0.619	0.335	0.064	0.009
58	0.000	0.233	0.039	0.020	0.052	-0.271	0.407	0.506	0.001
59	-0.001	0.003	0.005	0.013	0.695	-0.056	0.266	0.835	0.000
60	0.000	0.895	0.019	0.018	0.273	-0.195	0.349	0.576	0.000
61	0.014	0.566	3.439	1.462	0.019	36.544	27.858	0.190	0.020
62	0.000	0.542	0.045	0.018	0.014	-0.985	0.357	0.006	0.004

Source: Researcher Compilation

Appendix – III Result of Henriksson & Merton Market Timing Model

Scheme No.	α	p (α)	β1 (up market)	S. E. (β)	p (β)	β2 (down market)	γ (β1 – β2)	S. E. (γ)	p (γ)	R^2
1	0.0000	0.7610	-0.0590	0.0260	0.0210	-0.0600	0.0010	0.0010	0.4000	0.0020
2	0.0000	0.4290	0.0790	0.0160	0.0000	0.0790	0.0000	0.0010	0.6650	0.0110
3	0.0000	0.6050	0.0000	0.0230	0.9890	-0.0010	0.0010	0.0010	0.1760	0.0010
4	0.0000	0.3360	0.0500	0.0180	0.0070	0.0490	0.0010	0.0010	0.1350	0.0080
5	0.0000	0.0000	-0.0001	0.0010	0.9530	-0.0001	0.0000	0.0000	0.9930	0.0000
6	0.0000	0.0110	-0.0110	0.0050	0.0420	-0.0110	0.0000	0.0000	0.0940	0.0010
7	0.0000	0.0000	-0.0040	0.0040	0.2730	-0.0040	0.0000	0.0000	0.1250	0.0010
8	0.0000	0.7640	0.0260	0.0250	0.2900	0.0260	0.0000	0.0010	0.6250	0.0010
9	0.0000	0.7290	0.0210	0.0180	0.2600	0.0210	0.0000	0.0010	0.7680	0.0000
10	0.0000	0.0000	0.0140	0.0040	0.0000	0.0140	0.0000	0.0000	0.2220	0.0050
11	-0.0010	0.1570	0.2180	0.0260	0.0000	0.2200	-0.0020	0.0010	0.1420	0.0290
12	0.0000	0.0050	-0.0070	0.0050	0.1500	-0.0070	0.0000	0.0000	0.0710	0.0010
13	0.0000	0.0050	-0.0060	0.0050	0.1850	-0.0060	0.0000	0.0000	0.0750	0.0010
14	0.0000	0.4290	0.0170	0.0150	0.2460	0.0170	0.0000	0.0000	0.7560	0.0010
15	0.0000	0.0000	-0.0020	0.0000	0.3920	-0.0020	0.0000	0.0030	0.2090	0.0000
16	-0.0010	0.4120	0.0150	0.0370	0.6820	0.0160	-0.0010	0.0010	0.4180	0.0000
17	0.0000	0.6550	0.0770	0.0220	0.0000	0.0770	0.0000	0.0010	0.6990	0.0080
18	0.0000	0.8300	0.0880	0.0250	0.0000	0.0880	0.0000	0.0010	0.8820	0.0070
19	0.0000	0.7100	0.0760	0.0210	0.0000	0.0760	0.0000	0.0010	0.7560	0.0080
20	-0.0010	0.1360	0.1430	0.0190	0.0000	0.1440	-0.0010	0.0010	0.1960	0.0240
21	0.0000	0.4050	0.0840	0.0150	0.0000	0.0840	0.0000	0.0000	0.6480	0.0150
22	0.0000	0.2500	0.0190	0.0090	0.0450	0.0189	0.0001	0.0000	0.7970	0.0030
23	0.0000	0.7940	0.0460	0.0220	0.0370	0.0461	-0.0001	0.0010	0.8980	0.0020

24	0.0000	0.0000	0.0010	0.0030	0.7240	0.0010	0.0000	0.0000	0.9590	0.0000
25	0.0000	0.3860	0.0060	0.0150	0.6870	0.0060	0.0000	0.0000	0.0450	0.0010
26	0.0000	0.3750	0.0270	0.0240	0.2660	0.0260	0.0010	0.0010	0.2600	0.0020
27	0.0000	0.4650	0.0830	0.0210	0.0000	0.0830	0.0000	0.0010	0.5820	0.0100
28	0.0000	0.2600	0.0240	0.0180	0.1670	0.0240	0.0000	0.0010	0.4550	0.0010
29	0.0000	0.9480	0.0050	0.0190	0.7780	0.0050	0.0000	0.0010	0.9380	0.0000
30	-0.0010	0.1770	0.0470	0.0170	0.0050	0.0480	-0.0010	0.0010	0.2390	0.0030
31	0.0010	0.9700	-0.0250	1.8620	0.9890	0.0160	-0.0410	0.0600	0.4930	0.0000
32	0.0010	0.2540	0.0090	0.0230	0.7000	0.0080	0.0010	0.0010	0.1180	0.0020
33	-0.0010	0.1500	0.0650	0.0290	0.0250	0.0660	-0.0010	0.0010	0.3480	0.0020
34	0.0000	0.0000	0.0020	0.0030	0.5290	0.0019	0.0001	0.0000	0.4820	0.0010
35	-0.0010	0.0880	0.0010	0.0220	0.9560	0.0010	0.0000	0.0010	0.4870	0.0000
36	-0.0010	0.0910	0.0460	0.0250	0.0600	0.0470	-0.0010	0.0010	0.1980	0.0010
37	0.0000	0.2600	0.0770	0.0220	0.0000	0.0780	-0.0010	0.0010	0.3220	0.0050
38	0.0000	0.3250	-0.0070	0.0190	0.7050	-0.0070	0.0000	0.0010	0.4890	0.0000
39	0.0000	0.0050	-0.0090	0.0030	0.0040	-0.0090	0.0000	0.0000	0.0000	0.0050
40	0.0000	0.0000	-0.0020	0.0030	0.6050	-0.0020	0.0000	0.0000	0.0290	0.0020
41	-0.0010	0.0110	0.0120	0.0110	0.2840	0.0120	0.0000	0.0000	0.9860	0.0010
42	0.0000	0.0040	-0.0010	0.0070	0.8750	-0.0010	0.0000	0.0000	0.9020	0.0000
43	0.0000	0.5790	-0.0070	0.0250	0.7910	-0.0070	0.0000	0.0010	0.9980	0.0000
44	-0.0010	0.2590	0.0620	0.0250	0.0110	0.0630	-0.0010	0.0010	0.4620	0.0030
45	-0.0010	0.0090	0.0550	0.0240	0.0200	0.0570	-0.0020	0.0010	0.0270	0.0020
46	-0.0010	0.1160	0.0310	0.0170	0.0630	0.0310	0.0000	0.0010	0.3720	0.0010
47	0.0000	0.9940	-0.0130	0.0230	0.5680	-0.0130	0.0000	0.0010	0.5970	0.0000
48	-0.0010	0.9700	0.1690	1.8060	0.9250	0.2170	-0.0480	0.0590	0.4200	0.0000
49	0.0000	0.4510	-0.0120	0.0210	0.5650	-0.0120	0.0000	0.0000	0.5290	0.0000

50	0.0000	0.2340	0.0070	0.0190	0.7140	0.0070	0.0000	0.0010	0.7820	0.0000
51	0.0000	0.3400	0.0180	0.0260	0.4690	0.0180	0.0000	0.0010	0.8110	0.0000
52	0.0000	0.3400	0.0590	0.0250	0.0190	0.0590	0.0000	0.0010	0.5980	0.0020
53	-0.0010	0.1050	0.0320	0.0270	0.2390	0.0330	-0.0010	0.0010	0.2810	0.0000
54	0.0000	0.3320	0.0900	0.0230	0.0000	0.0910	-0.0010	0.0010	0.3960	0.0070
55	0.0000	0.6080	0.0200	0.0180	0.2470	0.0200	0.0000	0.0010	0.9440	0.0010
56	0.0000	0.6080	0.0200	0.0180	0.2470	0.0200	0.0000	0.0010	0.9440	0.0010
57	0.0000	0.5390	0.0970	0.0230	0.0000	0.0980	-0.0010	0.0010	0.4560	0.0080
58	-0.0010	0.0920	0.0590	0.0280	0.0360	0.0600	-0.0010	0.0010	0.3120	0.0010
59	0.0000	0.1950	-0.0050	0.0180	0.7990	-0.0050	0.0000	0.0010	0.4400	0.0000
60	0.0000	0.6130	0.0050	0.0240	0.8260	0.0040	0.0010	0.0010	0.3780	0.0010
61	-0.0070	0.8620	4.8900	2.0120	0.0150	4.9530	-0.0630	0.0650	0.3330	0.0020
62	0.0000	0.7310	0.0540	0.0250	0.0320	0.0540	0.0000	0.0010	0.7910	0.0020

Source: Researcher Compilation

Appendix – IV Correlation Matrix between Portfolio Measurement Measures

	Sharpe	Treynor	Jensen	Fama	T&M	H&M
Sharpe	1.0000					
Treynor	-0.2895	1.0000				
Jensen	-0.1316	0.0116	1.0000			
Fama	0.1941	-0.0143	-0.9721	1.0000		
T&M	-0.0403	0.0054	0.4131	-0.5515	1.0000	
H&M	0.1485	-0.0115	-0.9801	0.9782	-0.5612	1.0000

Source: Researcher Compilation

Appendix – V Average Portfolio Measurement Measures (Institutional)

	Bank Sponsored	Institution	Private
Sharpe	0.0232	0.0208	0.0349
Treynor	-0.0616	-0.0317	-0.0261
Jensen	0.0002	0.0002	0.0016
Fama	-0.0001	-0.0001	-0.0005
T&M	-0.2511	-0.1430	0.3272
H&M	0.0000	-0.0008	-0.0032

Source: Researcher Compilation

Appendix – VI Average Portfolio Measurement Measures (Investment Objective)

	Growth	Hybrid	Income
Sharpe	0.0243	0.0384	0.0572
Treynor	0.0006	-0.0102	-0.1485
Jensen	0.0022	0.0003	0.0002
Fama	-0.0008	0.0001	0.0000
T&M	0.4513	-0.1978	0.0053
H&M	-0.0044	0.0000	-0.0001

Source: Researcher Compilation

Appendix – VII Description of Variables for Multiple Regression

Years	Dependent Variable	Independent Variable			
	Growth in AUM (%)	Penetration	No. of Schemes	Turnover	Growth in NSE (%)
2000-01	-19.84	3.86	393	1.03	-24.88
2001-02	11.05	4.06	417	1.64	-1.62
2002-03	-21.01	3.09	382	3.96	-13.4
2003-04	75.7	5.03	403	4.23	81.14
2004-05	7.12	5.04	451	5.61	14.89
2005-06	55.04	7.13	592	4.74	67.15
2006-07	40.77	10.08	756	5.94	12.31
2007-08	54.77	13.82	956	8.84	23.89
2008-09	-17.39	11.86	1001	13.07	-36.19
2009-10	47.13	16.55	882	16.32	73.76
2010-11	14.1	14.24	1131	12.72	11.14
2011-12	-5.1	12.67	1294	10.29	-9.23
2012-13	22.84	14.9	1309	8.9	7.31
2013-14	10.83	15.76	1638	9.81	17.98
Average	19.72	9.86	828.93	7.65	16.02
S.D.	30.85	4.97	410.10	4.52	35.71
Maximum	75.70	16.55	1638.00	16.32	81.14
Minimum	-21.01	3.09	382.00	1.03	-36.19

Source: Various AMFI. Planning Commission Reports and Researcher Compilation

Appendix – VIII Penetration of Asset Management Industry in India

(Rs. in Crores)

Year	Gross Domestic Product	AUM	AUM/GDP Ratio
2000-01	2348481	90587	3.857
2001-02	2474962	100594	4.064
2002-03	2570935	79464	3.091
2003-04	2775749	139616	5.030
2004-05	2971464	149600	5.035
2005-06	3253073	231862	7.127
2006-07	3564364	359097	10.075
2007-08	3896636	538508	13.820
2008-09	4158676	493285	11.862
2009-10	4516071	747525	16.553
2010-11	4918533	700538	14.243

2011-12	5247530	664792	12.669
2012-13	5482111	816657	14.897
2013-14	5741791	905120	15.764
Average	3745021.2	408683.3	**9.540**
St. dev	1207197.673	300909.287	4.952
Maximum	5741791	905120	16.553
Minimum	2348481	79464	3.091

Note- GDP is taken at Factor Cost (Constant Price).
Source: Compiled from various reports of AMFI and Planning Commission.

Appendix – IX Turnover Ratio of Asset Management Companies

Year	Gross Mobilisation (A)	Redemption (B)	Greater Value in A and B (C)	AUM (D)	Turnover (C/D)
2000-01	92957	83829	92957	90587	1.03
2001-02	164523	157348	164523	100594	1.64
2002-03	314706	310510	314706	79464	3.96
2003-04	590190	543381	590190	139616	4.23
2004-05	839708	837508	839708	149600	5.61
2005-06	1098149	1045370	1098149	231862	4.74
2006-07	1938493	1844508	1938493	326388	5.94
2007-08	4464376	4310575	4464376	505152	8.84
2008-09	5426353	5454650	5454650	417300	13.07
2009-10	10019022	9935942	10019022	613979	16.32
2010-11	8859515	8908921	8908921	700538	12.72
2011-12	6819678	6841702	6841702	664792	10.29
2012-13	7267885	7191346	7267885	816657	8.90
2013-14	8715253	8878287	8878287	905120	9.81
Average	4043629	4024563	4062398	410117.8	7.65
St. dev	3729016	3748177	3751896	290518.1	4.52
Maximum	10019022	9935942	10019022	905120	16.32
Minimum	92957	83829	92957	79464	1.03

Source: Various AMFI Reports and Researcher Compilation

Appendix – X Growth in AUM and NSE

Year	AUM	Growth of AUM	Market Index	Growth of NSE
2000-01	90587	-19.84	1148.2	-24.88
2001-02	100594	11.05	1129.55	-1.62
2002-03	79464	-21.01	978.2	-13.40
2003-04	139616	75.70	1771.9	81.14
2004-05	149600	7.12	2035.65	14.89
2005-06	231862	55.04	3402.55	67.15
2006-07	326388	40.77	3821.55	12.31
2007-08	505152	54.77	4734.5	23.89
2008-09	417300	-17.39	3020.95	-36.19
2009-10	613979	47.13	5249.1	73.76
2010-11	700538	14.10	5833.75	11.14
2011-12	664792	-5.10	5295.55	-9.23
2012-13	816657	22.84	5682.55	7.31
2013-14	905120	10.83	6704.2	17.98
Average	410117.8	19.715	3629.157	16.017
St. dev	290518.1	30.85396	1981.319	35.71
Maximum	905120	75.7	6704.2	81.14
Minimum	79464	-21.01	978.2	-36.19

Source: NSE Historical data, AMFI reports and Researcher Compilation

Appendix – XI Calculation of HHI of Asset Management Companies (2013-14)

Asset Management Company	AUM (Rs. in crores)	Share in (A)	Square of Share (A^2)
BOI AXA Managers Pvt Ltd.	1991	0.0022	0.0000
Canara Robeco Asset Management Co. Ltd	6499	0.0072	0.0001
SBI Fund Management Private Ltd.	65499	0.0724	0.0052
Union KBC Asset Management Company Pvt Ltd	2847	0.0031	0.0000
Baroda Pioneer Asset Management Company Ltd.	8106	0.0090	0.0001
IDBI Asset Management Limited	5929	0.0066	0.0000
UTI Asset Management Limited	74233	0.0820	0.0067
IIFCL Asset Management Co. Ltd.	168	0.0002	0.0000
LIC NORUMA Mutual Fund Asset Management Co. Ltd.	10584	0.0117	0.0001
Deutsche Asset Management (India) Private Ltd.	18795	0.0208	0.0004
Edelweiss Asset Management Limited	169	0.0002	0.0000
Escorts Asset Management Ltd.	269	0.0003	0.0000
IL&FS Infra Asset Management Limited	415	0.0005	0.0000
India Infoline Asset Management Co. Ltd.	234	0.0003	0.0000

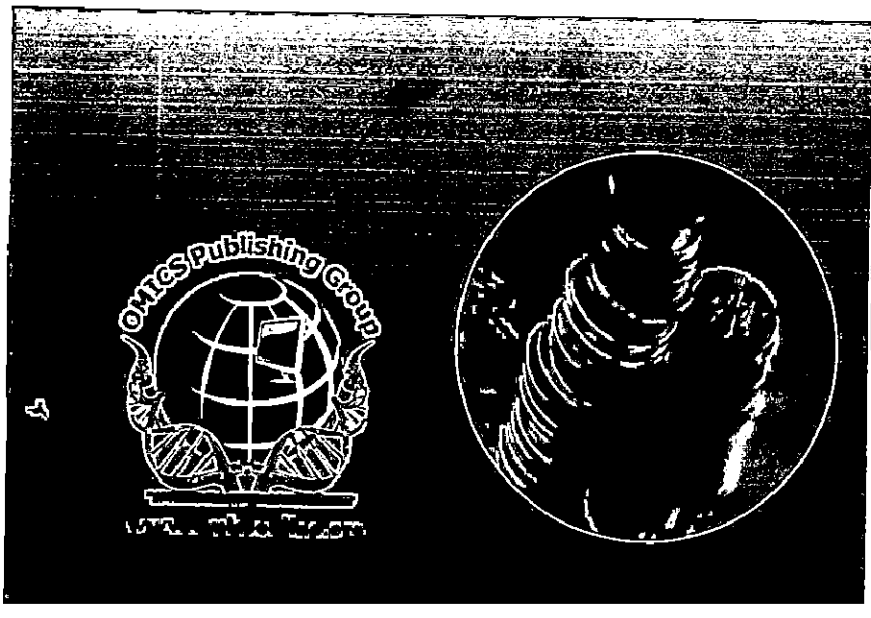
Indiabulls Asset Management Company Ltd	1097	0.0012	0.0000
J.M. Financial Asset Management Private Ltd.	6046	0.0067	0.0000
Kotak Mahindra Asset Management Co. Ltd	33079	0.0365	0.0013
L&T Investment Management Limited	18255	0.0202	0.0004
Motilal Oswal Asset Management Co. Ltd.	489	0.0005	0.0000
Peerless Funds Management Co. Ltd.	4046	0.0045	0.0000
PPFAS Asset Management Pvt. Ltd	340	0.0004	0.0000
Quantum Asset Management Co. Private Ltd.	356	0.0004	0.0000
Reliance Capital Asset Management Ltd.	103542	0.1144	0.0131
Sahara Asset Management Co. Private Ltd.	191	0.0002	0.0000
Shriram Asset Management Co. Ltd.	24	0.0000	0.0000
Sundaram Asset Management Company Limited	16422	0.0181	0.0003
Tata Asset Management Ltd.	21954	0.0243	0.0006
Taurus Asset Management Co. Ltd.	3523	0.0039	0.0000
BNP Paribas Asset Management India Private Limited	3446	0.0038	0.0000
Franklin Templeton Asset Management (India) Private Ltd.	45404	0.0502	0.0025
Goldman Sachs Asset Management (India) Private Limited	3764	0.0042	0.0000
Mirae Asset Global Investments (India) Private Ltd.	692	0.0008	0.0000
Morgan Stanley Investment Management Private Ltd.	2572	0.0028	0.0000
PineBridge Investments Asset Management Company (India) Pvt. Ltd	649	0.0007	0.0000
Pramerica Asset Managers Private Limited	2411	0.0027	0.0000
Axis Asset Management Company Ltd	16154	0.0178	0.0003
Birla Sun Life Asset Management Co. Ltd.	89051	0.0984	0.0097
DSP BlackRock Investment Managers Ltd.	31631	0.0349	0.0012
HDFC Asset Management Co. Ltd.	112963	0.1248	0.0156
ICICI Prudential Asset Management Co. Ltd.	106822	0.1180	0.0139
IDFC Asset Management Company Private Limited	41349	0.0457	0.0021
Religare Invesco Asset Management Company Private Limited	14496	0.0160	0.0003
HSBC Asset Management (India) Private Ltd	7659	0.0085	0.0001
ING Investment Management (India) Private Ltd	564	0.0006	0.0000
JP Morgan Asset Management (India) Private Ltd.	16248	0.0180	0.0003
Principal Pnb Asset Management Co.Private Ltd	4134	0.0046	0.0000
HHI Value			**0.0746**

Source: Various AMFI Reports and Researcher Compilation

RESEARCH PAPER

International Journal of Accounting Research

Open Access



International Journal of Accounting Research

Ashraf and Sharma, Int J Account Res 2014, 2:1
http://dx.doi.org/10.4172/ijar.1000113

Research Article

Open Access

Performance Evaluation of Indian Equity Mutual Funds against Established Benchmarks Index

Syed Husain Ashraf* and Dhanraj Sharma

Department of Commerce, Aligarh Muslim University, Aligarh, India

Abstract

In this paper, an attempt has been made to analyses the performance of equity mutual funds industry against risk free rate and benchmarks return over the five years. The samples consists 10 growths oriented- open ended- equity mutual fund schemes belong to 5 public and 2 private mutual fund companies. Results are tested through risk-return analysis, Coefficient of Variation, Treynor's ratio, Sharp's ratio, Jensen's measure, Fama's measure and Regression analysis. The data used is monthly closing NAVs and benchmark market index closing for the study period of April 2007 to March 2012. The risk return analysisrevealed that out of 10 schemes 3 have underperform the market, 7 are found to havelower total risk than the market and all the schemes have given returns higher than risk free rates. The Treynor ratio of all the mutual funds scheme are over perform the benchmark market index and Sharpe ratio of 3 mutual funds scheme underperform the benchmark market index. The result of regression analysis suggests that benchmark market return index has statistically significant impact on mutual fund return at 5% level of significance.

Keywords: Equity mutual funds; Benchmark index; Performance evaluation; Risk-return analysis; Regression analysis

Introduction

A mutual fund is a professionally managed type of collective investment scheme that pools money from many investors and invests in stocks, bonds, short term money market instrument and other securities. Mutual funds have become a widely popular and effective way for investors to participate in financial markets in an easy, low cost fashion, while muting risk features by spreading the investment across different types of securities, also called as diversification. Mutual funds have played important role in financial market in recent decades so it is pertinent to study the performance of mutual funds as it become the investors. The investment performance of mutual funds has been extensively examined for the development of capital market. The purpose of this paper is to evaluate the performance of equity funds during the period 2007-2012. The statistics revealed that the world mutual fund industry managed financial assets of $ 25.59 trillion and the number of mutual funds has also grown to 73343 funds worldwide at the end of March 2012, including 28358 equity funds contribute nearby 38% of total scheme. The Indian mutual fund industry has gained immense experience and continues to reinvent itself gradually, exhibiting steady growth over the last decade. The mutual fund industry in India began with setting up of the Unit Trust of India (UTI) in 1964 by the government of India. In 1987 public sector banks and two insurance companies (LIC and GIC) were allowed to launch mutual fund. Securities Exchange and Board of India (SEBI), regulatory body for Indian capital market, formulated comprehensive regulatory framework for Mutual funds in 1993 and allowed private corporate bodies to launch mutual fund schemes. Opening up the industry door to private sector banks and financial institution in 1993 had ushered in a new era in the evolution of Indian mutual fund sector. Foreign asset management companies were also allowed to set up their funds. With the entry, competitive efficiency in the industry showed a tremendous improvement and led to an applicable increase in the number and variety of scheme offered to the investors in terms of risk return preferences, maturity period and tax benefits. Asset under management (AUM) of the industry registered an increase from 47000 crore in March 1993 to a mind boggling nearby Rs. 670000 crore in March 2012. As per the report if Association of Mutual Funds of India (AMFI), there were 44 mutual fund houses covering Indian public sector and joint ventures with foreign players as against only 9 public sector mutual funds in 1993. The industry has recorded a compound annual growth rate of 15.43% in asset under management over the period of March 2007 to March 2012, at the same time when stock market and financial institution witnessed the heavy crushed by financial crisis.

Review of Literature

Literature on mutual funds performance evaluation is enormous. In this section, a few research studies that have influenced the preparation of this paper are discussed. Dhanda [1] made an attempt to study the performance evaluation of selected open ended schemes in terms of risk and return relationship by using rate of return, Beta, Standard Deviation, Sharp Ratio and Treynor Ratio. BSE-30 has been used as a benchmark to study the performance of mutual fund in India and the study period has been taken from April 1, 2009 to March 31, 2011. The finding of the study revealed that only three scheme have performed better than benchmark. Kumar Lenin Nooney and Devi Rama Vengapandu [2] evaluated the performance of selected mutual funds using average rate of return, standard deviation, Risk/Return, Sharpe ratio, Treynor ratio, Jenson Ratio and tested the hypothesis with ANOVA analysis. The sample for the study consists of 340 mutual funds belonging to Money market, Debt, Equity and Balanced category funds and further classified into public and private funds. The analysis of the study showed that there is no significant difference between the returns of private and public mutual funds. Gohar et al. [3] compared the performance of different types of mutual funds in Pakistan and

*Corresponding author: Syed Husain Ashraf, Department of Commerce, Aligarh Muslim University, Aligarh, India, Tel: 919412653056; E-mail: shusainashraf@gmail.com

Received November 09, 2013; Accepted January 30, 2014; Published February 07, 2014

Citation: Ashraf SH, Sharma D (2014) Performance Evaluation of Indian Equity Mutual Funds against Established Benchmarks Index. Int J Account Res 2: 113. doi: 10.4172/ijar.1000113

concluded that equity funds outperform income funds. Sample has been selected on the ranking of companies as per Pakistan Credit Rating Agency (PACRA) and the data will be collected for five years from 2005 to 2009 on monthly basis. The finding showed that within equity funds, broker backed category shows better performance than institutional funds and institutional funds are outperforming broker backed funds among income funds. Prince and Bacon [4] in their research paper analyzed the small cap growth stock sector of mutual fund industry against risk-free and market returns over the ten years 1997-2006. In this paper result were tested against a toolkit of performance of benchmarks to see if expected performance closely corresponds to actual results: The results indicated that some excess returns have been generated however beyond a handful of the funds, it is impossible to rely upon a single benchmark as a reliable indicator of even past performance. The evidence tends to support market efficiency since for the most part, the actively managed funds examined in this study produced returns that were largely expected. Debashish [5] attempted to study in his paper the performance of selected scheme of mutual funds based on risk return relationship models and measures. A total of 23 scheme offered by six private sector mutual funds and three public sector mutual funds have been studied over the time period April 1996 to March 2009. The overall analysis found Franklin Templeton and UTI being the best performers and Birla Sunlife, HDFC and LIC mutual funds showing the poor below average performance when measured against the risk- return relationship models and measures. This paper concluded as in times of high stock market volatility, mutual funds are the best source of investments with assured and adequate returns provided the selection of mutual funds is in the right direction. Somya [6] used some additional, measures like information ratio, appraisal ratio and M^2 measure other than conventional performance measures to bring out additional information about the competence of the fund manager. He was observed that study period from Jan2000 to Dec 2005 could broadly divided into two phases, the first being a bear period while the second one being a predominantly bull period. He found that, during the out of sample period, which is an outright bull period, the funds have outperformed well on the average but their benchmarks have performed even better. Deb et al. [7] evaluated return based analysis of equity mutual funds in India using quadratic optimization of an asset class factor model proposed by William Sharpe. The data used in the study covers the period from January 2000 to January 2005. They found the styles benchmarks of each sample of equity funds as optimum exposure to eleven passive asset class indexes. They also analyzed the relative performance of the funds with respect to their style benchmarks. The result of the study showed that the funds have not been able to beat their style benchmarks on the average. Panwar and Madhumathi [8] used sample of public sector and private sector funds of varied net asset to investigate the differences in characteristics of asset held, portfolio diversification on investment performance for the period May, 2002 to May, 2005. The study found that public sector sponsored funds do not differ significantly from public sector sponsored funds in terms of mean returns percentage. The study was also found that there was a statistical difference between sponsorship classes in terms ESDAR (excess standard deviation adjusted returns) as a performance measure, Noulas and Athanasios [9] evaluated the performance of Greek equity funds during the period 1997-2000. The evaluation was based on the analysis of risk and return. The first three years were characterized by positive returns of the stock market and the fourth year was year of rapid fall of the stock market with respect to risk and return. The result showed that there were big differences among the equity mutual funds with respect to risk and return and the result indicated that there was a positive relation between risk and return for the whole period while the betas for all funds were smaller than one. Rao Narayan and Ravindram [10] examined the performance evaluation of Indian mutual fund industry in a bear market was carried out through relative performance index, risk-return analysis, Treynor's ratio, Sharpe's ratio, Jensen's ratio and Fama's measure. The data was monthly closing NAV's collected from AMFI for the period of Sep. 98 to April 02 (bear period) of 269 open ended scheme. They excluding the funds whose return were less than risk free returns, 58 schemes were used for further analysis. The result of relative measures suggested that most of the mutual fund schemes in the sample of 58 were able to satisfy investor's expectation by giving excess returns over expected returns based on both premiums for systematic risk and total risk.

Objective of the study

The study has set the following specific objectives.

1. To measure the return earned by the sample mutual funds schemes and compare against the benchmark market returns.
2. To examine the degree of correlation that exists between fund and market return.
3. To evaluate the performance of equity mutual fund scheme understand the impact of benchmark index on mutual fund performance.
4. To find out the mutual fund schemes offering the advantages of diversification, along with adequate systematic risk compared to market beta risk.

Hypothesis of the study

The specific hypothesis which are tested as follows:

1. H_0: Variation in market index return has not significant impact on the return of mutual fund scheme.

   H_1: Variation in market index return has significant impact on the return of mutual fund scheme.

2. H_0 = Funds Sharpe Ratio – Benchmark Sharpe Ratio = 0

   H_1 = Funds Sharpe Ratio – Benchmark Sharpe Ratio ≠ 0

3. Funds Tryenor Ratio – Benchmark Treynor Ratio = 0

   H_1 = Funds Treynor Ratio – Benchmark Treynor Ratio ≠ 0

4. $H_0 = \alpha = 0$

   $H_1 = \alpha \neq 0$

Data and sources of study

The study aimed at analyzing the performance of open ended Indian mutual funds schemes which are primarily equity based. The period of the study is from April 2007 to March 2012 (60 months). This time period has been taken because of last decade we have the same economic conditions in India and analysis will give a trend of at least ten years.The samples consists 10 growths oriented- open ended- equity mutual fund schemes belong to 5 private and 2 bank sponsored mutual fund companies. These seven mutual fund companies were selected on the basis of highest average asset under management in the industry as these companies accounted for 65.18% of the total AAUM. The total asset under management was 664791 crore and equity schemes consist of 23.82% of total AAUM at the end of March 2012. The Table 1 represents the sample mutual fund schemes and their respective

Fund name	Option	Code	Benchmark Index	Code
Birla Sunlife Equity Fund	Growth	X_1	BSE 200	M_1
Birla Sunlife Frontline Equity Fund	Growth	X_{11}	tBSE 200	M_1
HDFC Equity Fund	Growth	X_2	S&P CNX 500	M_2
HDFC Long Term Equity Fund	Growth	X_{21}	S&P CNX NIFTY	M_3
ICICI Prudential FMCG Fund	Growth	X_3	CNX FMCG	M_4
Magnum Equity Fund	Growth	X_4	S&P CNX NIFTY	M_3
Reliance Long term Equity Fund	Growth	X_5	BSE 200	M_1
Reliance Regular Saving- Equity Fund	Growth	X_{51}	BSE 100	M_5
Templeton India Equity Income Fund	Growth	X_6	BSE 200	M_1
UTI Leadership Equity Fund	Growth	X_7	S&P CNX NIFTY	M_3

Table 1: Mutual funds and benchmark index taken as sample.

benchmark index of the scheme. The code is given to all the schemes and benchmark index for the convenient in analysis and interpretation.

The study has used secondary data. Monthly Net asset value (NAV) data of the selected mutual funds along with the monthly closing index value of the benchmark market indices are taken from the official websites mutual funds, Bombay stock exchange (www.bseindia.com) and National stock exchange (www.nseindia.com).

Research Methodology

Return

For each mutual fund scheme under study, the monthly returns are computed as:

return= $(NAV_t - NAV_{t-1})/ NAV_{t-1}$

Where NAV_t is Net Asset Value of a mutual fund scheme for a month t, NAV_{t-1} is the Net Asset Value for month (t-1). For the benchmark index, the return is calculated as:

return= $(Index_t - Index_{t-1})/ Index_{t-1}$

Risk

The risk is calculated on the basis of month-end NAV. The following measures of risks associated with mutual funds have been for the study:

Standard Deviation- The total risk is measured by the standard deviation of the monthly returns which was calculated using the following formula:

$$\sigma = \sqrt{\frac{1}{n-1}\sum_{t=1}^{n}(R_t - \bar{R})^2}$$

where,

σ = Standard Deviation, n= number of monthly return

R_t = monthly returns of the mutual fund, $\bar{R}$ = mean return of the mutual fund

The square of the standard deviation is called the variance. Variance= $(\sigma)^2$

Coefficient of variation-expresses the total risk undertaken by the mutual funds under consideration per unit of returned achieved. More specifically, the coefficient of variation was given by:

$$Coefficient\ of\ Variation = \frac{\sigma}{\bar{R}}$$

Beta(β)- Beta estimate the systematic risk, is the fund's volatility as regard market index measuring the extent of co movement of fund with that of the benchmark index.

$$\beta = \frac{\text{Covariance between fund return and market return}}{\text{Variance of market return}}$$

Higher the values of beta indicate a high sensitivity of fund returns against market return and the lower the value indicate lower sensitivity.

Risk free rate

A risk free rate asset has zero variability of returns. In this study the average weekly yield of 91 days Treasury bills have been taken as a risk free rate.

Sharpe technique

Sharpe [11] devised an index of portfolio performance measure, referred to as reward o variability ratio. The Sharpe ratio provides the reward to volatility trade-off. It is the ratio of the fund portfolio's average excess return divided by the standard deviation of the return and is given by:

$$S_p = S_p = \frac{\text{Risk Premium}}{\text{Total risk}}$$

$$\text{Fund's } S_p = \frac{R_p - R_f}{\acute{o}_p} \qquad \text{Benchmark's } S_p = \frac{R_m - R_f}{\acute{o}_m}$$

Where S_p= Sharpe Ratio, R_p= portfolio return, R_m= market return R_f= risk free return, σ_p= standard deviation of the portfolio, σ_m= standard deviation of the market

Treynor Technique

Treynor [12] conceived an index of portfolio performance called as reward to volatility ratio based on systematic risk. It is denoted by T_p is the excess return over the risk free rate per unit of systematic risk, in other words it risk premium per unit of systematic risk.

$$T_p = \frac{\text{Risk Premium}}{\text{Systematic risk}}$$

$$\text{Fund's } T_p = \frac{R_p - R_f}{\beta_p} \quad \text{Benchmark's } T_p = \frac{R_m - R_f}{\beta_m}$$

Where β_p = Beta of the portfolio, β_m= Beta of the market

Sharpe measure

In Sharpe measure variance explained by the index could be refereed as the systematic risk and the unexplained variance is called or unsystematic risk. Sharpe suggested that systematic risk and unsystematic risk for a fund can be measured as:

Systematic risk = $\beta^2 \times Var(R_m)$

Unsystematic risk (Unique risk) = $Var(R_p) - [\beta^2 \times Var(R_m)]$

Where $Var(R_p)$= Variance of mutual fund scheme return, $Var(R_m)$= Variance of market return.

Jensen alpha

Jensen [13] propound Jensen Alpha measures which is the intercept from the Sharpe- Linter CAPM regression of portfolio excess return on the market portfolio excess returns over the sample period. Jensen's alpha is the arithmetic difference of the portfolio's return from the return of a portfolio on the securities market line with the same beta (Appendix 1). Jensen defines his measure of portfolio performance as the difference between the actual return on a portfolio in any particular holding period and the expected returns on that portfolio conditional on the risk free rate, its level of systematic risk and the actual return on the market portfolio. Jensen's alpha measures is given by the-

J_p= Portfolio Return- CAPM Return= $R_p - \{R_f + \beta(R_m - R_f)\}$

Fama measures

Fama [14] measures breaks down the observed return into four components:

i. Risk free return R_f

ii. Compensation for systematic risk $\beta(R_m - R_f)$

iii. Compensation for inadequate diversification $(R_m - R_f)\{(\sigma_p/\sigma_m)-\beta)\}$

iv. Net superior returns due to selectivity $(R_p - R_f)-\{(\sigma_p/\sigma_m)(R_m - R_f)\}$

The second and third measures indicate the impact of diversification and market risk. By altering systematic and unique risk a portfolio can be reshuffled to get the desired return. Fama performance measures denoted by F_p are defined as:

F_p= Portfolio Return – Risk free return – Returns due to all risks

$= (R_p - R_f)-\{(\sigma_p/\sigma_m)(R_m - R_f)\}$

A positive value for F_p indicates that the fund earned returns higher than expected returns and lies above CML and a negative value indicates that the fund earned return less than expected returns and lies below CML.

Limitation of the Study

The limitations of the study are here under:

i. The study deals with only selected equity schemes of sampled fund houses operating in India

ii. The study is restricted to five years starting from April 2007 to evaluate the performance of the selected schemes of selected MFs but not their inception.

iii. The study is confine only to Indian mutual fund industry.

Empirical Results

The following section presents the results of the analyses of performance of sample funds. These sample funds were managed by Asset Management Companies (AMC) in India during the study period. The performance of sample equity funds were evaluated using different measures which are summarized in Tables 2-6.

Table 2 shows the compound growth rate of sample mutual fund scheme and benchmark index return for the period 2007-08 to 2011-12. The return of all the funds and market are positive except the return in 2008-09. In this year all the scheme provided negative return due to the financial crisis. At the end of financial year 2011-12, ICICI Prudential FMCG Fund (X_3) gave the highest return whereas the Birla Sun Life Equity Fund (X_1) provide the lowest return n all the sample schemes.

Table 3 shows the average risk and return of various sample scheme and benchmark index. In terms of average return X_{51} fund gave the highest return and the X_7 gave the lowest return in all the samples. X_{51} is the most risky and X_3 is the less risky in the entire sample scheme. It also shows that average return of 8 samples schemes is greater than the average of benchmark index and average risk of 3 sample schemes is greater than the average risk of benchmark index. The cross sectional average return of sample fund schemes is 0.1482 more than average return of benchmark index which is 0.1225. Risk free rate is 0.0007 which is taken from average weekly yield of 91 days Treasury bills. This table also revealed that out of 10 schemes 2 have underperform the market, 7 are found to havelower total risk than the market and all the schemes have given returns higher than risk free rates.

Testing of hypothesis- regression analysis of mutual funds scheme and benchmark index

In regression analysis, Mutual funds are taken as dependent variable and benchmark index is taken as independent variable. In this section certain hypotheses have been developed to make conclusion based on the following the hypotheses of the study. The Null Hypothesis statement (H_0) states that variation in market index return has not significant impact on the return of mutual fund scheme. The

	2007-08	2008-09	2009-10	2010-11	2011-12
X_1	14.649	-16.399	11.935	9.911	5.507
X_{51}	17.327	-10.586	17.923	17.793	11.782
X_3	9.677	-13.994	18.769	21.850	14.836
X_{55}	5.713	-16.735	8.334	12.025	8.019
X_2	20.083	-9.667	11.934	16.998	23.929
X_4	16.210	-13.977	13.279	13.695	10.042
X_6	10.249	-15.663	11.272	11.184	7.762
X_{11}	39.732	-7.071	27.596	23.379	15.686
X_5	15.025	-14.065	15.431	16.155	10.903
X_7	11.030	-15.410	6.218	6.934	3.358
M_1	15.981	-15.776	10.671	10.692	5.903
M_2	13.221	-16.043	9.215	9.228	4.988
M_3	15.817	-13.050	9.469	10.677	5.677
M_4	20.555	3.200	16.906	22.601	27.354
M_5	17.061	-14.862	10.746	10.887	6.060

Table 2: Compound growth performance of the sample mutual funds scheme and benchmark index.

Mutual Fund Scheme	R_p	σ_p	R_m	σ_m	R_f	Benchmark Index
X_1	0.1188	0.3164	0.1172	0.3237	0.0007	M_1
X_{11}	0.1547	0.2890	0.1172	0.3237	0.0007	M_1
X_2	0.1782	0.3088	0.1121	0.3278	0.0007	M_2
X_{21}	0.1236	0.2792	0.1097	0.3046	0.0007	M_3
X_3	0.1883	0.2359	0.1980	0.2013	0.0007	M_4
X_4	0.1503	0.3113	0.1097	0.3046	0.0007	M_3
X_5	0.1233	0.3005	0.1172	0.3237	0.0007	M_1
X_{51}	0.1999	0.3544	0.1166	0.3197	0.0007	M_5
X_6	0.1545	0.3117	0.1172	0.3237	0.0007	M_1
X_7	0.0907	0.2854	0.1097	0.3046	0.0007	M_3
Average	0.1482	0.2993	0.1225	0.3058	0.0007	

Table 3: Risk and return analysis.

Alternative Hypothesis (H_1) assumes that variation in market index return has significant impact on the return of mutual fund scheme. Regression equation [$R_p = \alpha + \beta(R_m) + e_t$] follow the linear relationship between mutual fund return and market benchmark index return. It signifies the value of parameter intercept (α) and slope (β). Intercept shows the return of mutual funds (R_p) when the return of market benchmark index (R_m) is zero whereas slope shows the rate of change in mutual fund return in respect to market return. Following result are found in testing the sample schemes in respect to their benchmark index with the help of E Views (Appendix 2).

The Result shows that benchmark index has significant impact on changes in return of mutual fund schemes. The coefficient beta and constants are used to construct the regression model. The positive value coefficient (0.0952) means that independent variable have the positive relationship with dependent variable and vice versa. The correlation value shows the high degree of correlation between the variables. The value of R^2 in the table interpreted as the fraction of the variance of the dependent variable explained by the independent variables. It shows that 94% of the changes in the X_1 scheme are explained by its benchmark index M_1. The P value is less than 0.05 which confirms that our model is significant. The null hypothesis (H0) is rejected and alternate hypothesis is accepted, so it means that independent variable can be used to predict the value of dependent variable.

The result of all the tests shows that benchmark index has significant impact on changes in return of mutual fund schemes. We found the positive value coefficient in all cases which reflect that benchmark index have the positive relationship with return of mutual fund schemes. The values of R^2 range from 88% to 96% which shows that major portion of changes in return of mutual fund schemes are determine by benchmark index except ICICI Prudential FMCG Fund where the value is 68%. The intercept value is also found positive in all results except two schemes i.e. ICICI Prudential FMCG Fund and UTI Leadership Equity Fund. The P value in all the cases is less than 0.05 which support the rejection of null hypothesis and acceptance of alternate hypothesis.

Table 4 reveals the value of Treynor and Sharpe Ratio of sample mutual funds and benchmark index. Sharpe ratio of the sample mutual fund schemes have the positive Sharpe value indicating that vast majority of equity mutual fund have produce greater return as compare to risk free rate. Higher the Sharpe ratio value of the sample equity funds for the period compared to the market portfolio clearly indicates that reward to variability ratio has been superior in the case of equity funds leading to conclusion that equity mutual funds have propounds superior risk adjusted return than the market return. Treynor Ratio's measure evaluation based on risk adjusted return and assesses risk adjusted in terms of return per unit of systematic risk. The ratio measured reward defined as the portfolio return in relation to the market fluctuations. It is aptly referred to the reward to volatility ratio. It was found that 8 out of 10 schemes over perform the market and 2 underperform the market in terms of Sharpe Ratio. Treynor ratio shows that the entire scheme outperforms the market as the Treynor ratio value is higher as compare to the Treynor value of benchmark index. Shape Ratio provide the better picture as the fund ICICI Prudential FMCG Fund(X_3) gave the highest Sharpe value and the highest compounded return in all the sample schemes. In terms of Treynor Value HDFC Equity Fund(X_2)has the highest value. Sharpe measure's result in It also reveals that that the average unique risk is very high (Var=0.0191, σ=6.38%) with the low degree of diversification at 7.28%. The fund managers have to improve diversification.

In Table 5, Jensen Models suggests that 8 schemes have provided excess returns over CAPM returns against fact that all the schemes providing excess returns over the risk free rates. X_{51} with α=0.0784, indicating a positive investment capabilities and X_3 and X_7 with negative performance. Statistically significant positive value of α indicates superior investment performance of mutual funds. Result of Fama's measure have been placed in Table 5 consisting of expected additional return for assuming market risk (Risk Premium) and expected additional return for inadequate diversification. Excess of actual return over expected return of the mutual fund, can be contributed to the superior stock selectivity of the mutual fund manager and is known as Net selectivity. Analyzing the Fama's components of investment performance, it is evident that expected risk premium for the schemes are very high with a maximum of 19.12 % for X_3 funds and minimum of 9.56% for X_{21}. In average risk premium expected is found to be very high (11.33%) contribute a substantial portion of actual average monthly return (14.82%) earned by the scheme due to high systematic risk represented by their beta value closer to market beta. In the net selectivity front 3 schemes (30%) have shown negative return and the rest 7 scheme (70%) have reported positive net selectivity indicating superior stock selection of the fund managers. The average net selectivity is positive 1.8% it can be said that equity mutual funds in India are generating satisfactory returns by their active stock selection exercise.

Table 6 shows the risk adjusted performance comparison of mutual fund scheme and benchmark index. The result revealed that in terms of Sharpe ratio, eight mutual fund schemes outperformed the benchmark index and all the schemes outperformed in terms of Treynor's index. Jensen ratios indicate that eight schemes realized the portfolio return greater than CAPM return. Paired Sample T-test is applied to check the statistically comparison of risk adjusted performance evaluation. The

	Treynor Ratio		Sharpe Ratio		Sharpe Measure	
Scheme Name	Fund	Benchmark Index	Fund	Benchmark Index	Unique Risk	Systematic Risk
X_1	0.1241	0.1007	0.3734	0.3600	0.0053	0.0968
X_{11}	0.1762	0.1007	0.5328	0.3600	0.0035	0.0816
X_2	0.1964	0.0948	0.5750	0.3400	0.0079	0.0896
X_{21}	0.1401	0.0956	0.4401	0.3579	0.0070	0.0728
X_3	0.1936	0.1734	0.7952	0.9802	0.0177	0.0377
X_4	0.1536	0.0956	0.4804	0.3579	0.0087	0.0898
X_5	0.1399	0.1007	0.4079	0.3600	0.0105	0.0820
X_{51}	0.1912	0.1005	0.5621	0.3626	0.1155	0.0124
X_6	0.1688	0.1007	0.4934	0.3600	0.0095	0.0887
X_7	0.0997	0.0956	0.3155	0.3579	0.0056	0.0772
Average	0.1583	0.1058	0.4975	0.4196	0.0191	0.0728

Table 4: Treynor& Sharpe Ratio and Unique Risk & Diversification Extent.

Fund	Jensen Measure	Fama Measure		
		R_β	R_{id}	F_p
X_1	0.0072	0.1109	0.0030	0.0042
X_{11}	0.0521	0.1018	0.0022	0.0500
X_2	0.0768	0.1007	0.0043	0.0724
X_{21}	0.0272	0.0956	0.0045	0.0228
X_3	-0.0036	0.1912	0.0405	-0.0441
X_4	0.0434	0.1062	0.0050	0.0384
X_5	0.0205	0.1021	0.0063	0.0141
X_{51}	0.0784	0.1208	0.0860	-0.0076
X_6	0.0477	0.1061	0.0055	0.0421
X_7	-0.0084	0.0985	0.0035	-0.0120
Average	0.0341	0.1133	0.0160	0.0180

Table 5: Jensen & Fama Measure.

Number of Funds	10
Mean Fund's Sharpe Ratio	0.49758
Mean Fund's Treynor Ratio	0.15836
Mean Jensen's Ratio	0.0341
Funds with Sharpe ratio>Benchmark Sharpe Ratio	8
Funds with Treynor ratio>Benchmark Treynor Ratio	10
Funds with Portfolio Retun>CAPM Return	8
Standard Deviation of Funds Sharpe Ratio	0.1334
Standard Deviation of Funds Treynor Ratio	0.0324
Standard Deviation of Jensen's Ratio	0.3085
T Statistics (H_0=Funds Sharpe Ratio – Benchmark Sharpe Ratio= 0) (H_1=Funds Sharpe Ratio – Benchmark Sharpe Ratio≠ 0)	1.960 (0.082)
T Statistics (H_0=Funds Treynor Ratio – Benchmark Treynor Ratio= 0) (H_1=Funds Treynor Ratio – Benchmark Treynor Ratio≠ 0)	5.211 (0.001)
T Statistics (H_0=α=0), (H_1=α ≠ 0)	3.499 (0.007)
Correlation between Funds and Benchmark Index' Sharpe ratio	0.777
Correlation between Funds and Benchmark Index' Treynor ratio	0.393
Correlation between Fund Return and CAPM Return	0.530

Note- 1- Level of Significance=5%, Two Tailed Test.
2- Results are based on 60 months return from April 2007 to March 2012.

Table 6: Comparative Analysis of Risk Adjusted Performance.

hypothesis of equality of means between the Sharpe ratio and Treynor ratio between the mutual funds and benchmark index provided the different interpretation. The null hypothesis is accepted at 5% level of significance as the P value is 0.082 signifies that mean equality of Sharpe ratio between mutual funds and benchmark index. In case of Treynor ratio P value is 0.001 (less than 0.05) stands for rejection of null statement that mean fund's Treynor ratio is equal to mean benchmark's Treynor ratio. Jensen α value is tested with one sample T-test to determine whether the performance indicated by the alpha is statistically significant. The null hypothesis of neutral performance is that alpha is equal to zero is rejected as the test found the P value is 0.007 a positive alpha value is usually interpreted as a superior performance and a negative as reflecting inferior performance.

Conclusion

In this paper we did a regression based analysis of equity funds in India and analyzed their performance with respect to benchmark indexes. The study conducts a comparative performance between

equity mutual fund schemes and benchmark indexes over the five economic periods. It is observed that influence of market factor is closely effected behavior of mutual funds returns. The correlation is found between mutual funds and benchmark index returns are significantly high. These funds are also observed to have high R^2 values (Coefficient of Determination) indicating the better diversification of the fund portfolio. The beta coefficient in most of the sample schemes was lower than one indicates that these mutual funds followed defensive investment policy. The result shows that performance of the majorityof sample mutual fund schemes are outperform the market benchmark indexes in term of Treynor and Sharpe ratio based on historical monthly returns. The reasons of outperformance of the funds that fund managers are efficient. They are diversifying the funds in different stocks which are generating higher returns. Fama's measure revealed that 70% of the mutual fund schemes have reported positive net selectivity indicating superior stock selection of the fund managers. Mutual fund managers also outperform the Market through their superior security selection and timing. The analysis shows that Indian Asset Management Company has been able to beat their benchmarks on the average. One of the lacunas of this study is that only open ended growth oriented equity schemes have been analyzed for the sample mutual funds. Future research may attempt to investigate and compare the balanced or income oriented schemes with equity oriented schemes.

References

1. Dhanda SK (2012) Performance evaluation of selected open ended mutual funds in India. International Journal of Marketing, Financial Services & Management Research 1: 29-38.
2. Kumar LN, Devi RV (2011) Performance evaluation of private and public sponsored funds in India. International Journal of Research in Commerce and Management 1: 24-35.
3. Gohar R, Ahmed S, Niazi U (2011) Performance comparison of mutual funds in Pakistan. African Journal of Business Management 5: 5583-5593.
4. Prince V, Bacon L (2010) Analysing mutual fund performance against establish performance benchmarks: A test of market efficiency. Research in Business and Economics Journal 1: 1-15.
5. Debashish SS (2009) Investigating performance of equity- based mutual fund scheme in Indian scenario. KCA Journal of Business Management 2: 1-15.
6. Guha DS (2008) Performance Evaluation of Equity mutual funds in India; An empirical exploration. IIM Calcutta.
7. Deb GS, Banerjee A, Chakrabarti BB (2007) Performance of Indian equity mutual funds vis a vis their style benchmarks: An empirical exploration. Journal of Applied Finance, ICFAI.
8. Panwar Sharad, Madhumathi RM (2006) Characteristics and performance evaluation of selected mutual funds in India. Institute of capital Market 9th Capital market Conference paper.
9. Noulas G and Athanasios (2005) Performance of mutual funds. Managerial Finance 31: 101-112.
10. Rao NS, Ravindram M (2002) Performance of Indian mutual funds. Proceedings of 15th Australasian Finance and Banking Conference held in Sydney (Australia) on 16-18 December 2002.
11. Sharpe WF (1966) Mutual Fund Performance. Journal of Business 39: 119-138.
12. Treynor JL (1965) How to rate management of investment funds? Havard Business Review 43: 63-75.
13. Jensen MC (1968) The performance of mutual funds in the period 1945-1964. Journal of Finance 23: 389–416.
14. Fama EF (1972) Components of Investment Performance. Journal of Finance 27: 551- 567.

Citation: Ashraf SH, Sharma D (2014) Performance Evaluation of Indian Equity Mutual Funds against Established Benchmarks Index. Int J Account Res 2: 113. doi: 10.4172/ijar.1000113